

ST. BARTHOLOMEW'S HOSPITAL JOURNAL



VOL. LX

JULY 1956

No 7

ST. BARTHOLOMEW'S HOSPITAL JOURNAL

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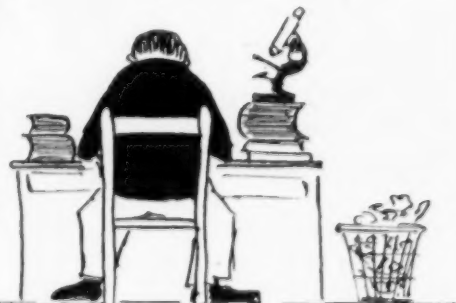
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ST. BARTHOLOMEW'S HOSPITAL JOURNAL

Vol. LX

JULY 1956

No.7

EDITORIAL

*'Come, and take choice of all my library,
And so beguile thy sorrow'.*

William Shakespeare.

SO URGES our Librarian to those burdened with the sorrow of ignorance, and his article on the use of the library appears on another page. It is unfortunate that any such exhortation is required, but it is a fact that the Medical College Library is used much too little: its reference books are consulted only by the research worker; its unique, and almost complete collection of books by Bart's men is unknown to many. The Library, for most, is a room from which a required textbook is snatched, a room in which the minimum amount of time is spent.

Several factors are concerned in causing this reluctance on the part of students to browse in the hospital's treasury of knowledge.

At this time of year the chill winter is already forgotten. Yet during a cold spell the Library is hardly warm and cheery, with the temperature inside falling almost as low as that prevailing in the Square. Figures can be seen at each end courting disaster as they huddle ever closer to the completely inadequate gas fires. This discomfort has at times been so acute that the library staff were forced to keep hot water bottles on

their laps, and a previous librarian had a hot brick delivered to him twice a day by the fireman, in order to maintain the circulation of his feet. While not suggesting that a brigade of firemen be hired, we do think that an electric fire could be placed in each alcove to supplement the ineffective central heating.

During the winter the dim light can hardly penetrate the gloom; it is difficult to absorb information from a text when one needs to strain to see it. That more efficient lighting is urgently required has been recognised by the authorities, and rewiring was, in fact, begun, but it stopped short at the entrance to the Museum. In summer the frosted glass obscures the modicum of sunshine that we do have, and the brown wood does not make for brightness. Even the seats do not encourage the student to linger. The old wooden chairs from the canteen and out-patients' departments could, with advantage, be replaced with comfortable armchairs.

Assuming ideal conditions for study, there is still the frustration of searching for a book which has not been returned. It is a great privilege to be allowed to borrow books

overnight, a privilege which is abused daily. No fines are imposed; the worst that happens, and this only after several days' recalcitrance, is that a letter may be sent threatening the offender with a report to the Dean. We feel a greater sense of responsibility should be felt by those who borrow books; this might reduce the annual loss of £100 which the library suffers from those who fail to return volumes. Although theft is rarely the intention, it is, to say the least, inconsiderate not to bring books back, whether they are left in an obscure corner in the home, or forgotten on the window ledges of the Abernethian Room.

It is not, however, the students who are responsible for the absence of certain periodicals from the library. Those who are inquisitive enough to look up an original article may find that the journal containing it forms part of one of the six departmental libraries, to which access is jealously guarded. This seems to us to be a case in which greater centralisation would be advantageous.

A new pre-clinical library is to be built in Charterhouse Square on the site of the recently demolished physiology building. We trust the opportunity will not be missed for attending to the warmth and comfort of the readers and staff. However fine this new building may be, it is to be hoped that the improvements suggested above will not be neglected. We would like to enjoy our library.

B.M.A. Meetings

AT THE annual meeting of the B.M.A., to be held at Brighton on July 5-12, several members of the Hospital staff are participating in the scientific sessions.

Dr. R. Bodley Scott will be chairman of the round table conference on Leukaemia, and Dr. W. M. Levitt will be on the panel.

Dr. Levitt will also speak on the radio-therapy of cancer in the plenary session devoted to Recent Advances in Knowledge of Cancer. In another plenary session on Handicapped Children, Mr. W. D. Coltart will speak on the Child Handicapped by Orthopaedic Conditions.

Mr. J. P. Hosford will be vice-president of the section of surgery; Dr. G. W. Hayward will be the official reporter of the section of cardiology; Dr. C. F. Harris will be

vice-president of the section of child health; Dr. G. F. Abercrombie will be vice-president of the section of general practice; Mr. W. D. Coltart will be vice-president of the section of orthopaedics; Mr. F. C. W. Capps will speak in the session on nasal obstruction; and Sir Archibald McIndoe will be president of the section of plastic surgery.

University of London

The degree of Master of Surgery was conferred on Mr. C. Naunton Morgan.

Congratulations

to Surgeon Lt.-Commander J. S. P. Rawlins, R.N., M.A., B.M., B.Ch., on his receiving the M.B.E. in the Birthday Honours published May 31, 1956. Surgeon Lt.-Commander Rawlins qualified from Bart's in December, 1945.

to John Potter, M.B., F.R.C.S., on his appointment as consultant Neurosurgeon to the Manchester Royal Infirmary and Manchester Regional Hospital Board.

View Day Ball

The View Day Ball was held on Friday, May 18, at the Park Lane Hotel. The President of the Students' Union, Dr. E. R. Cullinan, presided, and it was gratifying to see that he and his party were still enjoying themselves in the small hours of the following morning. Amongst the other members of the Staff, who were regretfully few in number, we were pleased to see Mr. E. A. J. Alment and Dr. R. W. E. Watts.

Dinner was very sensibly served a little later than advertised, and most of the guests had arrived and taken their places at the tables by the time the army of waitresses and waiters made their first onslaught. Although none of the dishes were particularly exotic or original, it was a considerable surprise to many when each guest received a whole small roast chicken.

Shortly after midnight, a cabaret was given by Nancy Watts, John Creightmore, John Bench and Jack Laurent. Delightfully topical, they based most of their items on View Day, the Hospital and the Hospital Staff. It is to be hoped that such talent will always be available for these occasions. The sequence of quick-steps, waltzes and Latin



Dr. Cullinan's party at the View Day Ball

American dances was broken twice by some Scottish Dancing played to the sound of two immaculately dressed pipers.

The Ball Committee is to be congratulated on their organization of the evening's entertainment. The only drawback was the small floor-space which did not allow everyone to dance at once; no doubt this will be remedied next year.

From Bart's to U.S.A.

We have news of two other members of the staff who are travelling to America in the coming months.

Dr. D. A. McDonald, University Reader in Physiology at the Medical College, has received a Rockefeller Award to visit centres at which the study of the circulation of the blood is being undertaken. Dr. McDonald is at present investigating the problem of flow in pulsating vessels; a short account of which is given in the report of the Physiological Society meeting.

Dr. J. Q. Mathias, at present a Demonstrator in Pathology, has received a clinical appointment in medical cancer at The Memorial Centre, New York. He will spend one year there, working on what the Americans call 'The Lymphoma service.' The Memorial Centre occupies a whole city block on the east side of the city, forming part of Cornell University Medical School. The Centre

includes the Memorial Hospital, the James Ewing Hospital, the Strang Cancer Prevention Clinic and the Sloane-Kettering Institute for Cancer Research.

Nurses

We are pleased to publish in this issue an article by one of the nurses. We feel that news from the nurses would be welcomed by readers of the *Journal*, of which nurses are themselves forming an ever increasing proportion. There is already a yearly publication concerned entirely with past and present Bart's nurses, but there is a need for more current news. A large number of the nurses in this Hospital are students, sharing the same interests as medical students. It would, perhaps, be beneficial to the societies, as well as to the nurses, if the latter were to play an active part in the organization of the societies. The *Journal* will be pleased to consider any material submitted for publication by nurses; and, if a candidate presents herself, will appoint a nurses' representative to provide information on activities of general or special interest.

Henry Ward

On Friday, June 1, a new ward for fracture patients was opened in the East Wing. The

nineteen beds include nine for men and ten for women, the sexes being separated from one another by a dividing wall. The opening of this ward will free two beds from each general surgery ward, which had previously been reserved for fractures. Mr. Coltart and Mr. Jackson Burrows will both have beds in this ward.

The name *Henry* is presumably derived from the old name of Henry VIII, which was used in the East Wing during the late nineteenth century.

The beds themselves have large wheels which makes their transport easy. There is a side room for each half of the ward.

In conjunction with the fracture ward, a new theatre, Theatre J., has been opened. This is in the basement of the East Wing, and contains, apart from the usual equipment, an x-ray plant and camera, plus a dark room. This will allow x-ray pictures to be taken while the patient is on the table, and will enable the surgeon to see the films within a very short time.

Royal College of Surgeons

The Begley Prize has been awarded to C. R. N. Ashbee.

Sir Charles Gordon-Watson

The medals of the late Sir Charles Gordon-Watson are now in the library. They include the C.M.G., and K.B.E. The plaque on the box containing the medals reads:

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Major-General Sir Charles Gordon-Watson,
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*Consulting Surgeon to St. Bartholomew's
Hospital*

We published, in the January *Journal*, excerpts from his memoirs, and we hope to publish further extracts from time to time. Sir Charles Gordon-Watson qualified in 1898, was appointed Assistant Surgeon to Bart's in 1910.

Societies

On another page we give a full account of the meetings of three of the college societies. We congratulate the Abernethian Society on having a record attendance at the meeting addressed by Dr. Fuchs. We trust that

this is an omen of a revived enthusiasm in the society.

The Physiological Society deserves our praise for their meeting introducing the research in progress in the physiological department. This type of meeting could be extended to other departments, so that the students would know the nature of the work being carried out by their teachers. In America during the vacation many medical students work in the research laboratories of their own hospital; surely if supplied with information of the current work of the var-



*Professor Cave exchanges snuff.
At a recent outing of the Natural History Society*

ious departments, the pre-clinical students would welcome any opportunity of being associated with research.

Our congratulations to the Natural History Society, which has had a full and varied season. We urge all its members to refer to a letter by Mr. H. E. Quick in the correspondence pages.

Percy

In the April *Journal* we urged some public-spirited gentlemen to repair the Bart's mascot. Unfortunately his condition has become even more grave; as well as the erythematous rash which was mentioned in

April, he now suffers from a complete dislocation of his cervical vertebrae.

His history entitles him to more consideration. He was created by Messrs. Dove Bros. for the 1939 revival of the St. Bartholomew's Fair held in the Square. This fair was organized to raise money for the Hospital; and Percy played his part nobly. He suffered nails to be hammered into him for the enjoyment of the public. After that hour of glory he languished for some years outside the entrance to the clinical lecture theatre. His morale improved, however, when he was removed to the more sympathetic atmosphere of Charterhouse. Here he was treated with such kindness, that he became fit enough to attend the procession of the Treasurer of the Hospital, Sir George Aylwen, when he was installed as Lord Mayor of London. It was considered fitting by the students, if not by the police, that this mark of respect should be paid to our Treasurer. Without vigorous treatment we fear that Percy will never again be in sufficient health to venture forth in public. This is to be regretted.

Retirement

Sir Weldon Dalrymple-Champneys, Deputy Chief Medical Officer of the Ministry of Health, will be retiring from public service at the end of July.

Rugger Club

The annual dinner of the St. Bartholomew's Hospital Rugby Football Club was held on Thursday, May 31. The President, Dr. Scowen, was in the chair, and after an excellent meal, he made a typically witty speech. The President then called on next season's captain, Mr. J. C. Mackenzie, to propose the health of the Club. Mr. Mackenzie, after referring to injuries acquired on the comparative calm of the cricket field, went on to praise the captaincy of the retiring captain, Mr. J. Tallack. Before proposing the toast, the red-headed Mr. Mackenzie caused considerable amusement with a story involving a ginger tom cat.

Mr. Tallack, replying, urged the members of the Club to give their wholehearted support to the new committee. Having fulfilled his duty, he then entertained those present with a series of anecdotes, some of which

brought back memories of the Cornish tour, as they had last been told on that occasion.

The party adjourned to the bar, where many reputations were made or marred, as the final function of the 1955-56 season drew to a close.

Christian Union

Our correspondent writes:

On the evening of Friday, May 11th, the St. Bartholomew's Hospital Christian Union began its annual weekend conference, held this year in the country house of 'Greenwoods,' which is set in a hundred and twenty acres of delightful formal gardens and parkland in Essex. Nearly fifty students and nurses attended.

Dr. and Mrs. Norman Green, of Chelmsford, were our hosts and the conference addresses were given by the Revs. Raymond Turvey and Richard Hovil, both of Christchurch, North Finchley.

There was plenty of time to play tennis, croquet or bowls, to walk in the bluebell woods, or to just sunbathe and talk. We heard an account of missionary work in Malaya; Dr. G. Lavy chaired a Brains Trust where a variety of questions were discussed; and films were shown illustrating Christian work which undergraduates can do during their vacations.

We came away on Monday morning regretting that the time had been so short, and agreeing that we had had a weekend that was both most enjoyable, and valuable in the things we had learnt of the Christian life and its practical works.

Journal Staff

Mr. G. D. Stainsby has resigned from the post of Editor. The Assistant Editor, Mr. J. T. Silverstone, has been elected Editor in his place.

Oxford—Bart's Club

The Oxford-Bart's Club are holding their Annual Sherry Party at Dr. Strauss's Rooms, 45, Wimpole Street, on the evening of Wednesday, July 25. Anyone who is eligible for membership, but has not received an invitation, is requested to write to the Hon. Secretary, The Abernethian Room, St. Bartholomew's Hospital.

LITERARY PRIZE

THE Publications Committee have decided to award two literary prizes. One will be for the best scientific contribution, and the other for the best non-scientific contribution written by a student or subscriber who has been qualified not longer than ten years, which has been published in the *Journal* during 1956. Each prize will be £5, and will be awarded by Christmas, 1956 and be announced in the January 1957 *Journal*. Additional smaller prizes will be awarded for poems, drawings or photographs published during 1956, if a sufficiently high standard is reached.

The object of these prizes is to encourage writing by students and those recently qualified.

Births

BEASLEY.—On May 30, to Valerie (*née* Thomasson) and Dr. Reginald Beasley of West Bromwich, twin daughters.

CAVE.—On April 28, to Pat (*née* Scott-King) and Dr. David Cave of Faversham, a son (Peter).

DALLAS ROSS.—On May 30, to Margaret and Dr. W. P. Dallas Ross, a daughter.

KELLY.—On April 30, to Diana (*née* Murray-Shirreff) and Dr. W. Pierce Kelly of Weston-s-Mare, a daughter.

LAVY.—On May 24, to Patricia and Dr. Gordon Lavy, a daughter (Fiona Ruth).

MCGRIGOR.—On May 11, to June and Ronald Buchanan McGrigor, M.B.E., F.R.C.S., a sister for Alastair.

MASON.—On May 31, to Marion (*née* Grant) and Dr. Seymour Mason, a son.

ORPWOOD.—On May 9, Alison and Dr. R. M. Orpwood of Banstead, a son (Stephen Glyn).

STONE.—On May 5, to Elisabeth and Dr. Patrick Stone of Chelmsford, a daughter.

VON BERGEN.—On May 16, to Sheila and Dr. J. E. Von Bergen, a daughter.

Engagements

LAIDLAW-McINNES.—The engagement is announced between Dr. Eric F. Laidlaw and Mrs. Brenda McInnes.

HOVENDEN-GRUNDY.—The engagement is announced between Dr. B. J. Hovenden and Miss A. C. Grundy.

Deaths

CHEESE.—On June 10, at Stourbridge, Dr. Frederick William Cheese, M.D. Qualified 1902.

LEVICK.—On May 30, at Budleigh Salterton, Surgeon-Commander G. Murray Levick, Qualified 1902.

QUENNELL.—On May 31, at Torquay, William Eyre Hamilton Quennell, M.R.C.S., L.R.C.P. Qualified 1925.

SILBIGER.—On May 10, Benno Silbiger, M.D. (Prague), M.R.C.S., L.R.C.P. Qualified 1942.

WEAKLEY.—On January 27, Dr. A. L. Weakley, aged 70, Qualified 1908.

Treasurer's Prize

Awarded to: A. D. L. Guest.

Certificates: P. G. Cassell.

D. M. Humphreys.

CALENDAR

Sat.	July	7	Dr. A. W. Spence and Mr. C. Naunton Morgan on duty. Cricket: v. Hornsey (A). Tennis: v. King's College Hospital (A).
Sun.	"	8	Cricket: Past v. Present (H).
Wed.	"	11	Golf: v. St. George's Hospital (H).
Sat.	"	14	Dr. R. Bodley Scott and Mr. R. S. Corbett on duty. Cricket: v. Incogniti (H). Tennis: v. Roehampton L.T.C.
Sun.	"	15	Cricket: v. Hampstead (H).
Wed.	"	18	Tennis: v. West Heath L.T.C. Golf: v. King's College Hospital (H).
Sat.	"	21	Dr. E. R. Cullinan and Mr. J. P. Hosford on duty.
Wed.	"	25	Golf: v. Middlesex Hospital (A).
Sat.	"	28	Medical and Surgical Professorial Units on duty. Tennis: Singles and Doubles Finals.
Sun.	"	29	Cricket: v. R.N.V.R. (H).
Sat.	August	4	Dr. G. Bourne and Mr. J. B. Hume on duty. Tennis: Stoneyhurst Wanderers (H).

LETTERS TO THE EDITOR

FROCK COATS

Sir,—In 1895, on the day that I entered Bart's, I was shown amongst other things the cupboard in the Operating Theatre (the new theatre at the top of the East Block was opened a few years later) in which the black frock coats matted with blood were still hanging, but the Sister said that she had never seen them used. All the surgeons used white coats—usually one was sufficient for the whole session.

I saw the carbolic sprays in several wards. They were occasionally used for septic cases, i.e., open virulent wounds, and particularly in the septic ward (Coborne). Most of the wards had discarded them, but all of them used gallons of Carbolic Acid and the air was always perfectly sweet.

Gloves of white cotton were first used by Butlin and a little later by Lockwood while I was still a dresser. Rubber gloves after 1900.

In 1901, when I succeeded D'Arcy Power as head of the Throat Department, the tonsil and adenoid operations were performed in the 'boxes' in the O.P. Department and between the operations the nurse washed the instruments literally under the tap. Our dear old Sister Surgery, who had been in charge there for many years, was furious when I insisted on having them sterilised and considered it quite ridiculous as she said 'even Mr. Butlin had never wanted them sterilised.' To be even with me she would only have them dipped in the steriliser for a few moments.

I have not just imagined these facts.

Yours faithfully,

DOUGLAS HARMER.

Red Willows,

Littlestone-on-Sea.

Sir,—One's memory tends to fade, but I remember in 1891 being especially shown the cupboard for the frock coats. I was in the theatre in that year and certainly the operating staff wore gowns. Later on I was House Surgeon to Butlin and Lockwood, and

they were very particular about cleanliness, and I remember Lockwood taking snippings from one's fingers. I do not think I ever saw anyone operate in his coat. We had very little minor sepsis after clean operations, but we had not any extractor fans in my time.

Yours sincerely,

J. PRESTON MAXWELL.

The Grove,
Brinkley,
Newmarket, Suffolk.

Sir,—I joined the hospital in 1891 after five years at Cambridge, where I was contemporary with Dr. Herbert Morley Fletcher and Horton Smith (later Sir Percival Horton-Smith Hartley).

I qualified in 1893 and remember well the stories of frock coats stiff with pus and blood; but there were no coats in the cupboard when I joined the hospital. I believe there is no living person who saw them there. I have little doubt that there were some grounds for the stories, which have been exaggerated by age and repetition. Surgeons in my day usually worked in their shirt sleeves turned up above the elbow and it is probable that they took steps to protect the rest of their clothing. In fact I have seen surgeons pin a towel round their necks as I have often done myself in the operation theatre at Bart's.

In the cupboard on the right of the auditorium in the Abernethy theatre there was a row of black hat pegs, each with the name of a surgeon painted over it in black letters—Sir William Savory, Mr. Tom Smith, Mr. Willett, Mr. Langton, Mr. Marsh. I have thought that these hat pegs may have been provided for the surgeons to hang their hats and overcoats, although I have never known anyone do this. The surgeon of the day always hung his coats and hat in the instrument room, attended by Mr. Rumbelow, the instrument curator.

Abernethy's operation table was still in the theatre and remained in use for several more years, and I have given many hundreds of anaesthetics on it. There were only two

operation theatres in the hospital: the Abernethy theatre and a small theatre in Martha (the gynaecology) ward, built and equipped by Mr. Harrison Cripps for his own use.

Carbolic sprays were not used, but at Addenbrooke's Hospital, Cambridge, Sir George Humphry used them freely. He turned two sprays on the students because, as he said, they were so dirty. The consequence was that it was not uncommon for the poor fellows to pass black urine, much to the alarm of some of them.

Yours faithfully,

GEORGE SHUTER.

6, Chiswick Lane,
London, N.W.4.

Sir, — I was very much astonished by the suggestion in Sir Charles Gordon-Watson's memoirs (January, 1956), that the surgeons still operated in old frock coats as late as 1899. The correction which you made in the June *Journal* showed that the coats had disappeared before 1899 and the letter from Mr. Douglas Harmer (qualified 1898) confirms this. The letters from Dr. George Shuter (qualified 1895) and Professor James Preston Maxwell (qualified 1896) show that the coats had disappeared by 1891 when they came to the hospital. Professor Sir Frederick Andrews (1927-28) gave a most interesting address to the Abernethian Society on "The Beginning of Bacteriology at Bart's." When he came to the hospital in 1882 the coats were still used, but he could not remember when they were abandoned. He thought that Mr. Bruce Clarke (assistant surgeon 1883, surgeon 1903) was the first to take off his coat and operate in shirt sleeves, but I have failed to find any mention of this in his writings.

I would have expected that such a complete change in practice would have been commented on in the *Journal* or Hospital Reports. Unfortunately, the *Journal* was first published in October, 1893, and the Reports from 1875 onwards make no direct reference. Moreover, the reports of many important discussions in this period—although I cannot pretend to have read them all and may well have missed some statement—never refer to this point. They nearly all deal with the principle of antiseptics, and whether the results of cleanliness are as good as those obtained by the use of antiseptics.

The Hospital Reports for 1893 contain two important papers: Mr. Harrison Cripps (assistant surgeon 1882, surgeon 1902) gave an account of the abdominal operations which took place in the new Martha theatre. A steriliser for instruments and bowls had been installed and the dressings were sterilised in the theatre itself. He gave elaborate details of the preparation of the theatre and the final preparation of the patient involved the washing of the patient all over, including the hair, on the morning of the operation with 1 in 20 carbolic. He also says: 'it remains for the surgeon to be particularly careful as to the cleanliness of his own person and hands and I make a point of changing all my clothes in the ante-room of the theatre and find nothing more comfortable to operate in than in a clean, thin flannel shirt.' He was clad like this in 1906, but had added an apron.

In the same volume Sir Henry Butlin (assistant surgeon 1880, surgeon 1892) described the results of the first year's work after he became full surgeon. He gave each dresser a printed address, in which he says that 'wounds do badly because they are poisoned from without. There are good reasons for believing that the poisons which injure wounds are not present in any serious form or quantity in the air of our wards or in the ordinary water of the hospital. Poisons may be introduced into wounds in various ways—by the fingers of the operator or assistants, by sponges, ligatures, instruments, dressings.' He gave minute details of the preparation of the patient's skin and the dresser's hands. He says 'it is some years since the carbolic spray was laid aside as useless; we have gradually come to feel less and less fear of the entrance of air into freshly made wounds even when it is the air of hospital wards and theatres.' Lister (1890) had himself abandoned the use of the spray in 1887. Although Butlin gave such minute details he never mentions his clothes.

However, his assistant surgeon, Mr. C. B. Lockwood (1890) had accepted the principles which Butlin practised (though he spoke of microbes not poisons) and published a series of 14 monthly instalments in the '*Journal on Aseptic Surgery*.' In August, 1895, he said: 'The surgeon and his assistant should remove their coats, turn up their sleeves and put on aprons to protect themselves from the jets of blood and splashing of lotions. The aprons, not having been sterilised, must

never be touched with the disinfected hands or be allowed to touch the wound.' The towels were also not sterile and instruments were not allowed to be placed on them. These notes were afterwards published in book form in 1896 and the reviewers in the 'Lancet' and 'British Medical Journal' made no comment on the clothes or on the meticulous care with which he disinfected his hands and took snips of skin for culture from everyone who was concerned in the operation to show that the hands had been properly disinfected. Although the article was not published until 1895 it seems most probable, in view of his paper in the 'British Medical Journal,' that he had taken off his coat in 1890 when he worked at the Great Northern Central (now Royal Northern) Hospital, and it is impossible to believe that Butlin was still wearing his 'frock coat' in 1892.

All Butlin's operations were done in the Abernethy theatre, which had a big auditorium which would hold more than 100 students, and one door opened directly onto the landing leading to the square. It used to be packed for surgical consultations and in 1905 Sir Anthony Bowlby, for whom I dressed, would occasionally operate immediately after the crowd had gone. It seems wonderful that so little sepsis occurred, but I do not think an extractor fan was provided in those days.

I think Butlin's views about the possibility of the air of the wards not containing poisons refer to the rarity of acute infectious diseases like erysipelas and hospital gangrene. Andrewes said he had never seen a case of the latter terrible disease in 1883, and in 1905 patients with erysipelas were isolated at once.

Dr. Mervyn Gordon in 1903 showed again the danger of the airborne infections in the theatre when he placed petrie dishes in Lockwood's theatre. He found that bacteria were spread throughout the theatre whenever anyone spoke without wearing a veil of at least four thicknesses (Douglas Harmer personal communication). The dangers of infection by the air have recently been shown by Sir James Paterson Ross, since minor sepsis occurred because the inlet fan supplying filtered air to the theatre was weaker than the extraction fan, so that air from the outside passages was sucked into

the theatre. When the balance was corrected the minor sepsis ceased.

Although the idea of the "frock coats" seemed so appalling to me in 1905 and must seem still more so to the present-day students who see the sterilised gowns, towels, caps, masks, gloves and rubber boots, it must be remembered that Lister, who did not retire from hospital until 1893, never wore a gown. He either took off his coat, rolled up his sleeves and pinned on a huckaback towel to protect his clothes (Sir Rickman Godlee) or just rolled back his cuffs (Sir St. Clair Thompson). He relied on the carbolic acid which he used on his own and the patient's skin and for his instruments, coupled with the antiseptic dressings to the wound.

St. Clair Thompson (1937) relates that when he was house surgeon in 1883 'I, myself, for operations, put on an old blue frock coat which I had previously worn in the dissecting room. It was stiff and glazed with blood. Yet so careful were we of any local contamination of the operation area that our wounds healed as rapidly and smoothly as they do with the ceremonial and ritual of sterilisation and asepsis nowadays. I suppose that the blue frock coat soon became impregnated with the carbolic from the spray which Lister was then using, and would not be quite so terrible as it sounds in modern times.'

Sterilised gowns similar to those now in use for the surgeons had been introduced in Professor von Bergmann's clinic in Berlin before 1892 (Schimmelbusch 1892), but those of the sister would not pass muster now.

The evolution of the modern theatre technique from the dreadful days before 1865 is an intriguing study, and Sir Rickman Godlee's *Life of Lister* and Sir St. Clair Thompson's personal memories make very interesting reading.

Yours faithfully,

GEORGE GRAHAM.

13, Park Crescent,
London, W.1.

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AFRICAN TOUR

Sir,—I have read with gratification the letter from Dr. C. Sims Davies in the *May Journal* about my recent visit to Southern Rhodesia. I greatly enjoyed the whole episode, and not least the delightful gathering of old Bart's students at the New Club in Salisbury. There was another equally satisfactory Bart's meeting at lunch in Bulawayo, at which Dr. King was host. But did Dr. Sims Davies really write in his letter that my lecture lasted for three hours? The lecture was not on the same evening as the dinner and my memory of the occasion is quite clear. I have a conviction that no lecture ought to last more than one hour, though I am afraid that at Salisbury I did speak for an hour and a quarter. I then invited anyone who had had enough to leave—though no one did so besides the two ex-patients—and the film then occupied another quarter of an hour. Dr. Sims Davies's other remarks are so kind that I cannot believe that one hour and a half seemed like three. I trust that your compositor has misread his script.

Yours faithfully,

GEOFFREY KEYNES.

120, Regent's Park Road,
 London, N.W.1.

We must assume that Dr. Sims Davies allowed his pen to slip. His letter unmistakably said three hours.—EDITOR.

SNAILS

Sir,—As an old Bart's man, about 1906, and ex-president of the Conchological Society and of the Malacological Society, I was de-

lighted to see the account of the Natural History Society in the *June Journal*.

May I suggest, however, that the nomenclature of the snails be modernised. Specific names begin with a small letter and not a capital (even when derived from proper nouns), and many of the old omnibus genera are now split up. *Cyclostoma Elegans* should be *Potomias elegans*, *Helix Pomatio* should be *Helix Cantiana* should be *Monachia cantiana*, and *Planorbis Carinatus*, *Planorbis carinatus*.

Hyalina is probably intended to be *Hyalinia*, an old generic name now split up into *Oxychilus*, *Retinella*, *Zonitoides*, etc.

But enough of pedantic grouching nomenclature is a dry subject.

It is well that some members of a great medical school should study snails, for apart from an inherent interest of beautiful shells, intricate anatomy, evolutionary and ecological interest, many molluscan species transmit debilitating or fatal diseases to man and animals. In many tropical regions Bilharzia infects a very large proportion of the population and its control is more difficult than that of malaria, and demands team work by medical men, biochemists, geneticists, botanical ecologists and sanitary inspectors, and molluscan specialists are as important in this field as mosquito experts were in the control of malaria.

I would recommend the study of Dr. Alan Mozley's many sided and beautifully illustrated works on the subject—they should be in the library.

If I can be of any help to members in the identification of British species or references to literature, I will willingly do so, but they could get still more help and information by joining the Conchological Society which would be more suitable for their purpose than the Malacological.

Yours faithfully,

H. E. QUICK.

Craythorne,
 Shinfield Road,
 Reading, Berks.

* * *

Letters received by July 14 will, if accepted for publication, appear in the August issue.

SOME AIDS TO AUTHORSHIP

by JOHN L. THORNTON

MOST professional men at one time or other during their lives feel the urge to appear in print. It may be that a letter to *The Times* or the *British Medical Journal* is indicated; a rare case, or more lengthy research must be reported; or historical research on a subject of special personal appeal demands to be shared with a wider audience. Before an article is prepared for the press it is essential to ensure that the facts are accurate; that previous work has been considered; that something new and worthwhile is presented; and that the style and lay-out is similar to that advocated by the periodical to which the article is sent for publication. Research work should begin in the library, and not in the laboratory, for it is essential to appreciate what has already been accomplished in any field before attempting to further its progress. An editorial in *Endeavour* declared: "Every student of science should be specifically instructed in the bibliography of science." Knowing how to use libraries and the bibliographical tools contained therein should be an important feature of the research worker's education.

The amount of printed material on any specific subject is truly appalling. Thousands of books and periodicals are published annually, and no specialist can hope to read more than a very small proportion of the literature devoted to his particular interest. To guide research workers to the relevant articles certain indexes, catalogues and abstracting organs are provided, and some of these are mentioned here. Assuming that

a rare case has been encountered, and one is desirous of tracing previous occurrences; or the literature on a specific subject is being sought, the following bibliographical tools can be consulted to advantage. *Excerpta Medica* is divided into seventeen sections each covering a specialist subject. The total cost of this periodical is almost one hundred pounds, and we do not subscribe to it, but *Excerpta Medica* demands a mention as being the most comprehensive of medical abstracting periodicals. The abstracts are in English, and the service aims at covering "every available journal in the world." Contributions are by experts, and although too expensive for the smaller medical library, specialists should consider subscribing to the sections covering their specific fields. *Abstracts of World Medicine*, published since 1947 by the British Medical Association, is selective, but the abstracts are authoritative and extremely useful. The *International Abstracts of Surgery*, published as a supplement to *Surgery, Gynecology and Obstetrics* is of primary significance in its field, and several specialist periodicals contain abstracts. These include *Anaesthesia*, *British Journal of Dermatology*, *American Journal of the Medical Sciences*, *British Journal of Urology* and *Thorax*.

Probably the most used bibliographical aid in any medical library is the *Quarterly Cumulative Index Medicus*. This does not contain abstracts, but lists under both authors and subjects the contents of most of the medical periodicals published throughout the world. Despite its title, it now covers six monthly periods, and is also very late in appearance. To supplement this organ we have the *Current List of Medical Literature*, issued monthly by the Armed Forces Medical Library, Washington, which lists under the titles of periodicals their main contents, but with author and subject indexes as guides to this unusual arrangement.

The *Medical Annual*, as its name implies, surveys the important literature published each year on selected subjects, and is akin to the fuller *Year Books* on various specialist

John Leonard Thornton

Born 1903 at Edgware, Middlesex. He trained at University College, London University from 1929 to 1934 in the School of Librarianship. He then became a member of the staff of the Wellcome Historical Medical Library in 1934. Mr. Thornton came to Bart's in January, 1938, and was appointed Librarian to the Medical College the following year. During the war he served four years in the Royal Signal Corps.

He is the author of 'John Abernethy,' and several other books on librarianship and the history of medicine and science.

medical subjects published in the United States in increasing numbers. The *Medical Annual* deserves wider recognition for its valuable summaries of recent literature, and can prove of use to examination candidates by providing up-to-date information long before it appears in the textbooks.

Tuberculosis Abstracts and *Ophthalmic Literature* are both issued quarterly, and are invaluable guides to specialists in these fields. *Biological Abstracts* covers an extremely wide range, as does *British Abstracts of Medical Sciences*. *Chemical Abstracts* and *Nutrition Abstracts and Reviews* are vital in their respective fields, while *Annual Review of Biochemistry*, and *Annual Review of Physiology* represent periodicals containing review articles covering the literature of specific subjects. *Physiological Reviews* and *Pharmacological Reviews* must also be mentioned as being of special value for their review articles containing lengthy bibliographies.

All these are current guides to the literature of medicine and cognate subjects, and from these references can be collected for investigation. Utmost accuracy in transcribing references must be emphasised. Take complete details, particularly of volume number, date of publication, and pagination, thus saving time later. There are too many inaccurate references, copied from bibliography to bibliography, causing immeasurable trouble to research workers and librarians, solely because the references have been incorrectly transcribed, and never checked.

The investigation of historical material presents similar problems, and it is generally advantageous to make oneself acquainted with the history of the subject in which one is particularly interested. Much work is duplicated because research workers fail to appreciate the work of their predecessors, and the knowledge of the ancients is not merely of historical interest. We can learn from their errors, as well as from their successes, for these are the men who laid the stepping stones leading up to modern science. We can trace the development of specific subjects by consulting general histories of medicine, and histories of its specialist branches. Standard texts containing extensive bibliographies can be consulted, or the actual literature of the past can be perused.

Interest in the people who have made the history of medicine engenders in one the desire for biographical research, and the following are suggested as possible sources of information. The quarterly *Current Work in the History of Medicine* issued gratis since 1954 by the Wellcome Historical Medical Library is an invaluable guide to recent literature, and is indispensable to the medical historian. The *Index Catalogue* of the Armed Forces Medical Library, now unhappily discontinued, records in dictionary catalogue form the contents of one of the largest medical libraries in the world. Of no use in tracing current writings, the *Index* is invaluable for biographical and bibliographical research, and has been described as "America's greatest contribution to medicine."

The *Bibliotheca Osleriana*, published in 1929, is a catalogue of Sir William Osler's library now housed at McGill University. It is a relic of the days when private book-collecting on a grand scale was possible, and contains a choice selection of the greatest contributions to medicine. Freely annotated, and endowed with something of the personality of Osler, the *Bibliotheca* is one of the most readable catalogues ever compiled. It is unique in concept and execution, enduring as a practical monument to a great character who once stated: "There is no better float through posterity than to be the author of a good bibliography."

Garrison-Morton's *Medical bibliography*, first published in 1943, with a second edition dated 1954, contains classified under subjects, and arranged chronologically within these subjects, details of most of the important texts contributing to the history of the medical sciences. By means of this book we can trace original descriptions of diseases, and reconstruct the development of specific subjects by means of milestones in the relevant literature. Complete forenames of authors are given, together with dates of birth and death, and many entries are suitably annotated.

General histories of medicine and of its branches provide useful information, particularly as these tend to fit subjects proportionately into their backgrounds, but most of the histories of medicine are unsatisfactory for various reasons. For example, they present general rather than detailed surveys;

they are too often compilations rather than the results of scholarly research, and thus they may perpetuate errors.

Biographies of individuals vary in value. We find the balanced biography but too rarely among the strictly critical, the offerings of the worshipper, and the over-emphasised word-for-word reconstructions so frequently poured out as biography. No biography, however satisfactory, can be all-inclusive and final. Fresh evidence presents itself, new letters are discovered, or the passage of time necessitates a re-evaluation. Obituary notices are sometimes the sole source of information on an individual. They are usually laudatory, for who would criticise even his bitterest enemy when he can no longer answer back? To isolate the reliable information from the unreliable is a most difficult task, and is one of the chief duties of the biographer. He should take nothing for granted, endeavouring to trace all information to its original sources, consulting parish registers, records of birth and death, documents at the Public Record Office, manuscripts and documents at the British Museum, the Wellcome Historical Medical Library, the Royal College of Surgeons, the Royal College of Physicians, and similar collections.

Collective biographies must also be consulted, particularly the *Dictionary of National Biography*, Plarr's *Lives of the Fellows of the Royal College of Surgeons*, and Munk's *Roll of the Royal College of Physicians*, where appropriate. The latter two have been brought up to date in recently published volumes. There are many similar reference works that may prove helpful. The biographies of contemporaries, and the histories of hospitals and other institutions with which an individual was connected may prove fruitful. Furthermore, the archives of hospitals, particularly the older ones, contain valuable information regarding appointments and activities of the staff.

Having collected together references from the bibliographies, abstracts, etc., and decided which of these are to be consulted, the next problem is to locate them. Books can be looked for under authors' names in library catalogues, and if not available, should be asked for from the library staff. No library can hope to stock every book

published, but there is machinery for obtaining books from almost any library in this country, and even from abroad. By sending a request to the National Central Library books are located by means of joint catalogues, or by means of regularly circulated lists. Unfortunately, this process may entail considerable delay, as although libraries may possess the requisite books, they may be unwilling to lend them. The best policy is to ask the librarian how to obtain a given volume. He can advise you (a) whether or not he stocks it, or can borrow it from Lewis's Lending Library or from another source with little delay; (b) if it is available in other institutions to which readers other than members are admitted; (c) if there is no immediate hurry, the librarian can approach the National Central Library; or (d) he can advise you to try the British Museum Library, or similar copyright institutions.

Journals are listed on cards in our catalogue in a separate drawer headed PERIODICALS, and a list of current journals available in all the libraries in the Hospital and College is available gratis. Catalogues of periodicals housed in several other medical libraries are also available for consultation in the Library, and the locations of most scientific periodicals is provided by the *World list of scientific periodicals*. Incidentally, photostat copies of articles in periodicals taken by the Science Museum Library can be obtained quite cheaply, and the Royal Society of Medicine offers both photostat and microfilm reproduction facilities. We have a microfilm reader in the Charterhouse Branch Library. The Royal Society of Medicine and the British Medical Association take most of the important medical periodicals, but these libraries are available only to members. The Royal College of Surgeons of England specialises in its own subject, and welcomes visitors to use its excellent library facilities. The University of London Library is open to all students and members of the staff within the University.

The material has now been collected, and will probably be represented by piles of notes that must be sifted, boiled down and arranged into a coherent article. Study the periodical for which the article is intended, read the instructions to contributors, and note the arrangement of previously pub-

lished articles. In the Library there is a file containing many of these "instructions to the contributors" collected together for the use of potential authors, and these rules, closely followed, may make all the difference between the acceptance or rejection of a contribution. The file in the Library contains several other items of special interest to authors. One issued by the Royal Society is entitled *General notes on the preparation of scientific papers*, 1950, containing hints on the arrangement of papers, footnotes, title and headings, references, tables, illustrations, nomenclature, proof correction and similar subjects. Another pamphlet published on behalf of the Royal Society Information Services Committee consists of *A list of British scientific publications reporting original work or critical reviews*, (1950). This provides details of publisher, title, date of foundation, synopsis of contents, rate of publication (e.g., weekly, monthly, etc.), page size, price, names of editors, addresses, and similar information.

The World list of scientific periodicals previously mentioned not only indicates the locations of the periodicals recorded therein, but also contains abbreviations of the titles of journals. These abbreviations have been adopted as the standard required by numerous medical and scientific periodicals for the references given at the end of articles. UNESCO and WHO have published another list of abbreviations of titles compiled by L. T. Morton and entitled *World medical periodicals*, 1953. The British Standards Institution also has in preparation a set of rules for abbreviating such titles. Another British Standards Institution publication contained in the Library bears the title *Bibliographical references*, and provides examples of standard methods of bibliographical citation.

Proof correction also devolves upon authors, and it is essential that any alterations, additions or deletions should be intelligible to the printers. Standard conventional signs are used for this purpose, and we have a copy of *Printers' and authors' proof corrections*, published in 1945 by the British Standards Institution, and also a framed list of the more commonly used symbols.

There are several guides to the writing of articles and theses, and two classic examples

are housed in the Library. These are Sir Humphrey Rolleston's *On writing theses for M.B. and M.D. degrees*, 2nd edition (1925), and Sir Clifford Allbutt's *Notes on the composition of scientific papers*, 1905. The latter is particularly valuable, giving information on the choice of subjects, on titles, references, grammar and punctuation, among other details. We also stock S. F. Trelease: *The scientific paper, how to prepare it, how to write it*, 2nd edition, 1951, and W. R. Bett's booklet: *The preparation and writing of medical papers for publication*, issued gratis by Menley & James, Ltd.

The list of references appended to articles can be of vital importance to readers. If headed "Bibliography" these lists should be exhaustive, but the less exacting title "References" implies that the books and articles listed therein have been consulted in the preparation of the article, and contain additional material on the subject. References should not be added to articles merely as padding. Too frequently items are taken from abstracts, bibliographies, etc., and appended to papers as "furniture." The originals have not been consulted, quite frequently the references are incorrect, and readers searching for additional information are misled.

Rules for the arrangement of details contained in references vary, but generally speaking the following information is essential: (a) surname of author, followed by forenames or initials; (b) date of publication (if used in the text in conjunction with the author's name to guide readers to specific references); (c) title of book; (d) edition; (e) place of publication, and perhaps name of publisher; followed by the date of publication if not previously quoted. In the case of articles in periodicals, (a) and (b) as above are given, and in my opinion the title of the article should follow in all instances. Many periodicals omit this feature, but very frequently a research worker tracing references knows immediately upon seeing the title that the article can have little interest for him. This information is followed by a recognisable contraction of the title of the journal carrying the article, then the volume number, date (if not previously given), and inclusive pagination. In my opinion this latter feature also is essential, for a brief mention of the first page of the article cannot convey any idea of its size. A twenty-page review

of a subject may be more attractive than a summary in two pages, and intending readers should be given guidance in this matter. Unfortunately, editorial policy is rigorous, and the rules laid down for intending contributors must be closely followed. Shortage of paper and high printing costs tend to dictate these rules, so that accuracy and consideration for the reader have in many instances been sacrificed to brevity.

Finally, I would appeal to all intending to conduct research and to write for the press that they should make a point of accurately noting all references of interest. When referring to an article or book take complete details of it, appending these to your notes, and if your reference reaches proof form, re-check it at this stage. Learn how to use libraries. The catalogues, bibliographies and other reference tools housed therein are keys to an immense store of knowledge. The time spent in finding out how to use these

keys is eventually amply compensated for by the time saved in providing the basis for your own work. L. T. Morton's *How to use a medical library*, 2nd edition, 1952, is an excellent guide for research workers and students, but when difficulties arise consult the library staff. With constant practice, librarians learn to find their way through the intricacies of medical literature, gaining a general knowledge of that literature which busy practitioners and research workers can never hope to acquire. Librarians cannot be expected to have an extensive knowledge of medicine and its numerous branches, but they know where to look for that information. Libraries are arranged and administered to give readers the greatest benefit from the literature housed therein. Take the trouble to appreciate this arrangement; learn to help yourself to the wealth of knowledge contained in the writings of your colleagues and of your predecessors.

STUDENTS UNION

COUNCIL MEETING

A meeting of the Council was held on Wednesday, 30th May. Business discussed included the following items:—

1. The Council was informed by the secretary of the Boat Club that the cost of hiring boat racks and changing facilities for the coming year would be £18 12s.; this included £15 for changing facilities, £12 12s. to London R.C., £21 for racks to Barclays Bank R.C., and £33 to the University of London R.C. Permission for this expenditure was granted.

2. New equipment has been ordered for the telephones in the men students' cloakroom following the visit by G.P.O. inspectors. It is hoped that this will soon be installed.

3. The secretary was asked to write to the Assistant Clerk to the Governors describing the state of the midwifery clerks' sitting room, and asking if the situation could be remedied in the near future.

4. The following officers were elected:—
Senior Secretary B. W. D. Badley.
Junior Secretary R. G. White.

5. The Ball Committee report was read and approved. It was agreed that the basic price

for the tickets should be increased by 5s., and that tickets bought one week prior to the Ball would be reduced by a similar amount. Tickets reserved but not collected one week before the Ball would not be sold at the reduced price.

Professor Rothblat thanked the members of the Ball Committee for their work in arranging the Ball.

6. Mr. White had written that, owing to rising costs of food and labour, teas could no longer be provided at 1s. 3d. each. He proposed individual set teas to be obtained from a buffet, at an increased price. The Senior Secretary was authorised to offer Mr. and Mrs. White £5 to cover the loss incurred over Provision 7 teas. The suggestion was made that the price of teas be raised immediately, and the Senior Secretary agreed to discuss the matter with Mr. White.

7. The following have been awarded Honours Colours:—

Ladies Hockey	Sheila Macail.
Rugby Football	J. C. Mackenzie,
	B. W. D. Badley,
Boat Club	D. A. Chamberlain,
Squash Club	J. B. Nichols,
	R. C. Whalley.

8. Permission was granted for the Boat Club to change their uniform from a black blazer to a white blazer with one inch black trimming, and a hospital crest on the pocket.

R.G.W.

HUMAN HAEMOGLOBINS

by HERMANN LEHMANN

ADULT AND FOETAL HAEMOGLOBINS

THE different chemical and physical states of normal adult haemoglobin are of considerable clinical interest. Compounds such as methaemoglobin or carboxy-haemoglobin differ from each other in the state of the haem or in their gaseous saturation. It has, however, been known since 1866 that there are at least two essentially different types of human haemoglobin: adult haemoglobin (haemoglobin A) and foetal haemoglobin (haemoglobin F). They differ in the nature of the globin part of their molecules and can therefore not be converted into each other by simple experimental procedures.

At birth 60-80 per cent. of the respiratory blood pigment is haemoglobin F. None is formed after birth, and at the age of 4 months all of it has been replaced by haemoglobin A. The faculty of producing haemoglobin F is maintained whenever there is, in early infancy, a diminished production of haemoglobin A. Haemoglobin F may then persist into childhood, or even into adult life. Hence it can be found in severe haemoglobinopathies, and occasionally in leukaemias and in other haematological disorders with early onset. Haemoglobin F by itself is not the cause of a blood disease, but its presence after the age of 4 months serves as an indicator of some such condition. It can be differentiated from haemoglobin A and its variants by a specific plateau in the ultraviolet spectrum ranging from 2898 Å to 2190 Å. It was discovered 90 years ago by reason of its resistance to denaturation by alkali, and to this day the routine determination in the laboratory is based on a measurement of the 'alkali resitant' haemoglobin.

VARIANTS OF ADULT HAEMOGLOBIN

The production of haemoglobin F is under a genetical control which differs from that of haemoglobin A. The genes for haemoglobin A and its variants (S, C, D, E, G, H, I, J) are, however, multiple alleles, one locus on one chromosome being occupied

by the genes for haemoglobin A or one of its variants. As we inherit two chromosomes for haemoglobin A, one from each parent, we can be homozygous for haemoglobin A (AA), or heterozygous for haemoglobin A and one of the variants (AS, AC, AD, AE, AG, AH, AI, AJ). Provided we possess at least one effectively functioning A gene no haemoglobinopathy will result. If, however, for example, we are homozygous for the variants S or C (SS, CC) we will suffer from sickle-cell anaemia or haemoglobin C disease respectively. Similarly, heterozygotes for S and C will suffer from sickle-cell: haemoglobin C disease. Haemoglobin A and its variants are differentiated by electrophoresis where they show different mobility, and by difference in solubility in salt solutions of various pH.

THALASSAEMIA

Deficiency in haemoglobin A can be due to the replacement by one of its variants, but its formation can also be suppressed by the genetically independent inheritance of the thalassaemia gene. This gene specifically interferes with the expression of the A gene. An AA homozygote who inherits a single thalassaemia gene will show no gross abnormality, and his condition is described as thalassaemia minor. The homozygous inheritance of the thalassaemia gene will, however, interfere so seriously with the formation of haemoglobin A that a severe anaemia will result: thalassaemia major. The haematological picture is similar to that of an iron deficiency anaemia. But whereas

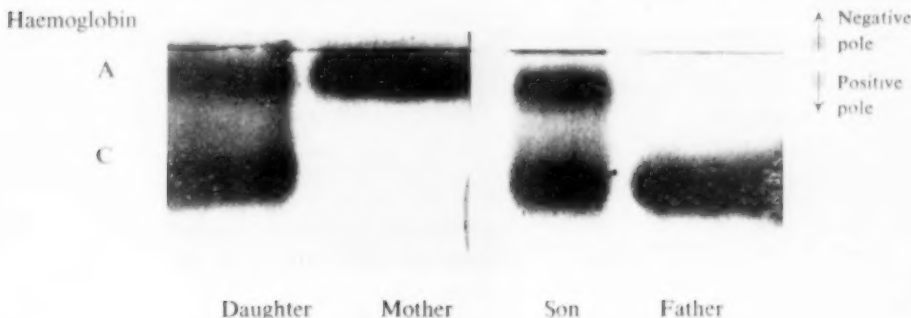
Hermann Lehmann

Dr. Lehmann was born in Germany, and studied at Heidelberg and Basle, where he took his M.D. He then worked with Otto Meyerhof on muscle metabolism. After coming to England he obtained a Ph.D. from Cambridge, while working in Sir Gowland Hopkins's laboratory. During the war he spent much time in India with the R.A.M.C. A period in East Africa preceded his arrival at Bart's in 1951. He is at present Associate Chemical Pathologist to the Hospital, and a member of the M.R.C. sub-committee on sickle cell anaemia.

the shortage of haemoglobin in the deficiency anaemia can be overcome by iron therapy, no such remedy can be applied in thalassaemia major. There is the apparent paradox of a hypochromic microcytic anaemia with copious iron stores in the bone marrow and a high serum iron level.

Whereas a single thalassaemia gene will not cause a major disturbance in an AA homozygote, it may give rise to an anaemia not dissimilar to that of thalassaemia major in individuals who possess only one gene for haemoglobin A. Thus heterozygotes for A

genotype can only be established by family studies. Recently a number of individuals who seemed to be SS homozygotes were found to be in fact double heterozygotes for the A and S haemoglobins and for the thalassaemia gene. Some of their children were AA homozygotes. Though it is reasonably certain that EE and DD homozygotes have been studied, the final evidence of homozygosity based on family study has not yet come forward in these cases. A GG homozygote is however known. The EE, DD, and GG 'homozygotes' did not show severe



Paper Electrophoresis of the Haemoglobins of a Family

The Father is homozygous for haemoglobin A, the Mother is homozygous for haemoglobin C.

The Son and Daughter are heterozygotes for the haemoglobins A and C.

and a haemoglobin variant such as S, C, or E who also carry one thalassaemia gene will no longer possess the one effectively functioning A gene which can protect them against a haemoglobinopathy. However, the anaemia in these double heterozygotes is variable and at least sickle-cell; thalassaemia may not always be a severe condition.

PHENOTYPE AND GENOTYPE

The suppression by a thalassaemia gene of A formation in an A heterozygote may be so marked that the analysis of the haemoglobin may not demonstrate the presence of haemoglobin A in the phenotype. The possession of only one haemoglobin variant other than A may therefore not necessarily denote that the individual is a homozygote for this haemoglobin variant. The true

haemoglobinopathies, and it is doubtful whether the terms 'haemoglobin E disease,' 'haemoglobin D disease,' 'haemoglobin G disease,' are applicable in these cases. These conditions might perhaps preferably be described as E-haemoglobinaemia, D-haemoglobinaemia, and G-haemoglobinaemia.

SICKLE-CELL HAEMOGLOBIN (S)

The haemoglobin which has been studied most intensively is the S haemoglobin. (It was named haemoglobin B at one time, but the name was changed to haemoglobin S (sickle) for reasons of alliteration, hence the letter B is missing from the annotation of the haemoglobin variants). In 1910 Professor J. B. Herrick of Chicago described an unusual form of haemolytic anaemia in a West Indian Negro student. A noteworthy feature were 'peculiar elongated and sickle

shaped red cell corpuscles.' It was then found that red cells of other perfectly healthy Negroes could be induced to 'sickle' when they were deprived of oxygen. These people were called sickle-cell trait carriers to differentiate them from the sickle-cell

mations stretch the cell envelope, thus causing the sickling phenomenon.

The life span of the AS red cell is normal, but that of the SS cell is reduced, hence sickle-cell homozygotes suffer from a haemolytic anaemia. In addition, intravascular



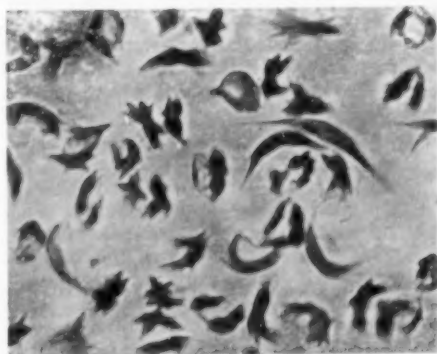
Map showing distribution of Haemoglobins C, D, and E

anaemia patients. The sickling tendency was found to be an inherited character. In 1949 J. V. Neel, in the United States, and E. A. Beet, in Northern Rhodesia, showed that the sickle-cell trait seemed to be the condition found in the heterozygote, and that sickle-cell anaemia was the homozygous state, where the sickling tendency had been inherited from both parents. These theories were fully confirmed in the same year by Linus Pauling and his colleagues working at the California Institute of Technology. They showed that the haemoglobin of sickle-cell trait carriers could be separated by electrophoresis into two components; one was normal adult haemoglobin, and the other a hitherto not known pigment which they called sickle-cell haemoglobin. In sickle-cell anaemia patients only haemoglobin S was found. Haemoglobin S differs from haemoglobin A by being relatively insoluble in the reduced state. When cells containing haemoglobin S are de-oxygenated, haemoglobin tactoids are formed, these intracellular for-

sickling causes blockage of small vessels, thrombosis, and infarcts.

HAEMOGLOBINS C, D, E, G, H, I, J.

Haemoglobin variants other than S do not cause the sickling phenomenon, but homozy-



Sickle Cells

KNOWN HAEMOGLOBIN COMBINATIONS

Haemoglobin A and its variants S, C, D, E, G, H, I and J are under a different genetical control from that of foetal haemoglobin (F), and of Thalassaemia.

AA		Normal Adults
AA	F	Infants
AA	T F (not always present)	Thalassaemia minor
AA	TT F (nearly always present)	Thalassaemia major
SS	F (nearly always present)	Sickle-Cell Anaemia
AS		Sickle-Cell Trait
AS	T F (presence of A often assumed only)	Microdrepanocytic Disease
CC	F (sometimes present)	Haemoglobin C Disease
AC		Haemoglobin C Trait
AC	T F	Haemoglobin C— Thalassaemia
SC	F (nearly always present)	Sickle-Cell — Haemo- globin C Disease
DD		Haemoglobin D Disease
AD		Haemoglobin D Trait
SD	F	Sickle-Cell — Haemo- globin D Disease
EE	F (traces occasionally)	Haemoglobin E Disease
AE		Haemoglobin E Trait
(A)E	T F (20-40% F, no A found)	Haemoglobin E— Thalassaemia
AAE		Traces of an E like Hb can be found some- times in normal in- dividuals, and in Thalassaemia minor
AAET F		(Kunkel-Wallenius phenomenon)
GG	No anaemia	Homozygous G
AG		Haemoglobin G Trait
AI		Haemoglobin I Trait
AH	Genetical Position not yet clarified	Haemoglobin H Disease
AJ		Haemoglobin J Trait

gotes may show a reduced red-cell survival. In the case of haemoglobin C disease (CC) this may cause a considerable haemolytic anaemia. In the others, increased destruction seems to be well compensated, but it is likely that additional stress may cause a haemolytic anaemia to become apparent.

The various haemoglobins differ from one another in their electrophoretic properties. At alkaline pH, haemoglobins H and I move faster than haemoglobin A, and the other variants move more slowly. Haemoglobins H and I, S and D, and C and E move either identically or very similarly at alkaline pH. H and I, and C and E differ, however, considerably in their electrophoretic properties at acid pH and can thus be distinguished.

is found all over tropical Africa, but it is not equally distributed amongst the African races. It is also found in some centres in the Mediterranean countries, in the Middle East and in some aboriginal tribes of Southern India. Haemoglobin C is present at high frequency in Western Africa, elsewhere it has occasionally been observed wherever it might have been introduced by the importation of West African slaves. In West Africa the highest incidence has been seen in the Northern Gold Coast, it falls towards the Southern Gold Coast, and declines both in the territories east and west of the Gold Coast. . . . Never in the history of genetics, with the possible exception of Ford's melanism story in the moth, have geneticists



Map showing distribution of Thalassaemia gene

Haemoglobin D cannot be sorted out from haemoglobin S by electrophoresis, but it differs from S by not being so insoluble in the reduced state, and it can be identified by solubility determinations.

ANTHROPOLOGICAL SIGNIFICANCE OF THE HAEMOGLOBIN VARIANTS

Of particular interest is the differential distribution of the haemoglobin variants amongst the human races. Haemoglobin S

and those with kindred interests been quite so close to having a ringside seat at the origin and dissemination of a "new" gene' (from a personal letter by J. V. Neel). Haemoglobin D has been seen occasionally in 'white' families in North America, Algiers, Britain, and Turkey. Recently we have found that it occurs with some regularity in North-West Indians and in Gujeratis from what was once the Bombay Presidency. Haemoglobin E is frequent in Burma and in Siam, and it is also found in Indonesia and Ceylon. Recently we have seen examples in

people from Bengal and from Malaya. The other haemoglobins have so far been seen in single families only. The thalassaemia gene is predominantly found in the Mediterranean countries, but it is also present in the Middle East, India, Burma, Siam, Indonesia, and possibly in China. Some examples have also been seen in West Africa. No

of AS heterozygotes balances the loss of the S gene by sickle-cell anaemia.

INCREASING IMPORTANCE OF THE HAEMOGLOBINOPATHIES

Morbidity and mortality due to parasites and malnutrition are on the decline in tropi-



Map showing distribution of Sickle Cells

abnormalities have been seen in Australian and Melanesian aboriginals.

BALANCED POLYMORPHISM

The distribution of the sickling gene has been particularly studied from the point of view of population genetics. A large proportion of SS homozygotes die from sickle-cell anaemia before they reach the age of reproduction. In spite of this loss of S genes in every generation, the sickle-cell is present at high frequencies in many parts of tropical Africa, and in some population-isolates in Italy, Greece, Arabia, and India. This paradox has now been explained by the higher resistance to malignant malaria found in AS heterozygotes. Malignant malaria removes or used to remove a considerable proportion of infants in all these regions. The greater death rate of AA infants compared with that

cal and subtropical countries. However, we know of no effective measures to deal with the haemoglobinopathies. Palliative treatment can be applied in sickle-cell crises, and blood transfusion may tide a patient over a period of stress, such as pregnancy. Thus the haemoglobinopathies are on the increase in the populations affected. It has been calculated that in British West Africa alone there must be a quarter of a million children with sickle-cell anaemia. In the Southern Gold Coast, three out of every hundred children born should suffer from some form of haemoglobinopathy. It will soon become necessary to consider the need for marriage advice. Certainly in Italy and in Greece the population is well aware of the hereditary aspects of thalassaemia major and of sickle-cell anaemia. It is only a question of time before the peoples of Africa and Asia will ask for a considered approach to these problems.

THE WHITE SLAVES OF NEO-SLAVONIA

by PETER QUINCE

THE REST of the household had gone up to bed. My host thoughtfully replenished both our glasses and settled himself comfortably.

'I suppose you have heard how we have dealt with our Social Evil in Neo-Slavonia?' he asked with a chuckle, 'What do you think of it?'

I confessed that I knew nothing whatsoever about it.

'What!' he slapped his knee, 'haven't you heard? Oh, I must tell you then. You'll love this.

'Every now and then we would have outbreaks against the prevailing laxity of morals, as I expect you do. Bishops, judges and newspapers suddenly wake up, and there's a to-do, and then it all dies down again. The last time it happened, our Prince suddenly took action.'

He laughed immoderately.

'I really ought not to laugh,' he said apologetically, 'but it really was superb. I ought not to be saying this either: but I just cannot make up my mind whether our sovereign is a knave, a fool or a genius. He certainly has the devil's own luck with his Anglophile projects. As usual, he said, "What would the British do?" and before you could say Johann Nosnibor he had inaugurated a Ministry of Masculine Entertainment, extracted a weekly contribution from every male between the ages of sixteen and eighty-six, and by the subtlest propaganda persuaded all the geishas to be nationalized. There was supposed to be Free Choice, but every male was put on one Nominal Roll or another to begin with. The geishas were allowed to have up to a thousand—or was it two thousand?—names on their lists at a capitation fee of twenty schillings per annum. A nice, steady, assured income, what? . . . Guess what happened?'

'I really cannot conceive,' I replied, 'I've never heard of anything like it.'

'Well, these poor girls got no rest—apart from the statutory day and a half off each week and a four weeks' leave each year.

Otherwise they were on call twenty-four hours a day. It didn't work out quite so badly as that, of course; but they could never be sure of any leisure. And sooner or later a lot of chaps, who otherwise would never have dreamed of calling upon their services, were saying, "I've been stamping my cards now for months and months without getting anything out of it. What about it?" Perfectly natural: just what one would expect.

The next thing was that the General Duties Geishas got a bad name for indifferent service. Poor dears, they simply had no time or energy to give really personal attention.'

'Yes, I can see that,' I said, and quoted sententiously—"That individual attention which is expected from all professional men and women, and which professional men and women take pride in giving," Carlyle, wasn't it?'

'I don't know. At any rate, they couldn't. Nobody can when they are metaphorically rushed off their feet. And then, as I told you, we had this Nationalized Litigation Scheme, and that added to their worries. True, all costs and damages are paid by the State, but the publicity of a court case is bad.'

'But what happened to private practice?' I asked,—"Surely it must have enjoyed a terrific boost—or was it made illegal?'

'Not quite: every possible obstacle was put in its way, however. Oddly enough, it fell off considerably. People said, quite reasonably, that they weren't going to pay twice. No. There were much more cunning moves. A hierarchy was established within the Service: specialist appointments with shorter hours and higher pay, merit awards—you'd never believe the scramble to get into administrative jobs, the applications to Take Silk, and advertisement of posts and the short-list parades.

'There is one very happy result: no geisha encourages her daughter to follow in

her footsteps. They put them into uniform. Domestic service usually; failing that, Medicine.'

'But did the geishas take this lying down, as it were?' I asked.

'Most of them followed their leaders—who were already in Administrative jobs—like so many sheep. Every now and then a few reactionaries hold indignation meetings,

but it does them no good. There was one the other day in this very township. They moved a resolution deploring the manner in which their profession has been—I don't know the English equivalent. They use a Neo-Slavonian expression which I fancy has a different meaning with you. They say their profession has been *doctored*.'

'No. We only apply that phrase to neo-Tom Cats.'

SPORTS DAY

THIS YEAR Sports Day was held at Chislehurst on Saturday, June 16. Such an event depends greatly on the weather, and we regretfully record that rain fell almost continually. This in no way dampened the enthusiasm of the competitors, the officials, or the hardy spectators who must all be congratulated.

The Captain of the Athletic Club, Donald O'Sullivan, greeted the participants and visitors with the following note in the programme:

'Together with drinking beer and consorting with nurses, Rugby Football is the accepted pastime of the medical student, but there have always been a few strange fellows who went running, just running their hearts out after nothing, not even a nurse or a football.

'Bart's Athletic Club can find among its vice-presidents, holders of Olympic gold and other medals and world record breakers; and it is fitting that one of the oldest athletic clubs in the country, and also one of the oldest clubs in the hospital should make a great occasion of its Sports Day.'

The detailed results of each of the events are summarised below, but such bare facts cannot describe the excitement which occurred in some of the races. In the 440 yards, for instance, the Club secretary, C. P. Roberts, avenged last year's defeat by beating O'Sullivan by a yard. Roberts was the outstanding athlete of the day; he won four events, including the three middle distance races and the high jump, with true versatility. His successes greatly helped the Preclinical C team to secure a winning margin of points with the accompanying prize of a barrel of beer. The Captain lived up to his reputation

as an international hurdler by winning both sprints convincingly.

A large number of ladies, after much coaxing by well wrapped males, agreed to run in the 80 yards race. The field got away to a good start. Miss Barnard strode ahead to win by a yard from Miss Chambers.

Mrs. E. G. Tuckwell graciously presented the cups and prizes.

3 MILES—Sir Charles Gordon-Watson Cup	
R. G. Thompson; C. P. Roberts;	
J. H. Lewis	16'13"
120 YD. HURDLES—B. N. Ash Cup	
A. S. Tabor; P. R. Ernst; M. I. M. Noble	17.3"
JAVELIN	
A. J. Garrod; D. Rosborough; A. Ross	
HIGH JUMP—Mrs. Reginald Vick Cup	
C. P. Roberts; P. R. Ernst; A. J. Garrod	5'6"
220 YARDS—Griffiths Cup	
D. O'Sullivan; A. S. Tabor; B. D. G. Hill	25.0"
1 MILE—Mrs. Morley Fletcher Cup	
C. P. Roberts; R. G. Thompson;	
J. H. Lewis	4'44"
100 YARDS—Bowlby Cup	
D. O'Sullivan; R. Fell; A. S. Tabor	10.5"
WEIGHT	
D. F. Craggs; A. J. Garrod; A. Ross	34'
120 YARDS (handicap)	
A. S. Tabor; D. F. Craggs; D. Rosborough	12.7"
880 YARDS	
C. P. Roberts; R. G. Thomson;	
B. D. G. Hill	2'13.4"
LONG JUMP—Edgar Hartley Kettle Cup	
A. S. Tabor; P. R. Ernst; M. I. M. Noble	19'8½"
DISCUS—B. N. Ash Cup	
A. J. Garrod; D. Lammiman	
LADIES 80 YARDS	
Miss P. Barnard; Miss J. Chambers;	
Dr. P. Lindop, Miss Hartley, equal.	
440 YARDS—Mrs. Harrison Cripps Cup	
C. P. Roberts; D. O'Sullivan; D. D. G. Hill	55.5"
INTER-YEAR RELAY	
Clinicals B (Tabor, Martin, O'Sullivan, Lewis)	
POLE VAULT	
J. Sugden; C. P. Roberts	13'6"

OUTPATIENT DENTAL ANAESTHESIA

by T. B. BOULTON

THESE notes were written for a demonstration of an out-patient 'gas' session given by Mr. T. Schofield and myself, during a course for general dental practitioners in the Dental Department of the Hospital last November. It was suggested that they might be of wider interest to students and occasional dental anaesthetists.

This account describes the use of nitrous oxide, with the addition of supplements when indicated, for out-patient dental cases of all ages. Brief reference is also made to certain other agents and techniques.

Nitrous oxide is a weak anaesthetic; when used alone anoxia is required to assist in producing anaesthesia. Normal adults tolerate the degree of anoxia required well and recover more rapidly and completely than from any other anaesthetic, and, if necessary, may be sent home unescorted.

SELECTION OF CASES

There are few adults who cannot be satisfactorily anaesthetised with nitrous oxide, provided they enjoy normal health. Difficulty is sometimes experienced with plethoric individuals who are heavy drinkers, and a supplement may then be required to produce adequate anaesthesia. Procedures which last longer than fifteen minutes are not suitable for general anaesthesia in the dental chair. Certain patients do not tolerate the required degree of anoxia well, these include children under 12 years, cardiac cases, hypertensives, anaemic patients, epileptics, asthmatics, bronchitics, and pregnant women; supplements should be used in these cases.

SUPPLEMENTS

The excretion time of a supplement anaesthetic is always longer than that of nitrous oxide. Patients' reaction times are lengthened and their judgment impaired for some hours; they should not, therefore, be sent home unescorted. Trilene is the most commonly employed supplement, it is a non-explosive vapour administered from a vapouriser which is designed to give a vapour of low concentration suitable for

dental anaesthesia. Thiopentone, an intravenous anaesthetic administered in sleep doses of 100 to 200 mg. as a preliminary to nitrous oxide-oxygen anaesthesia, is useful in resistant individuals; it is not suitable for patients with the medical complaints mentioned above.

APPARATUS

The most commonly employed machines are the Walton apparatus marks 1, 2, 3 and 4, and the McKesson, all of which can be equipped with suitable trilene vapourisers. These machines all have the following controls: nitrous oxide-oxygen percentage control, positive pressure control, valve tension control on the mask, and the trilene control lever. Accessory apparatus required includes dental props, throat packs, mouth-gags of the Fergusson type with quick-release locks and tongue forceps.

PRELIMINARY PREPARATION

Anaesthetics should not be administered within four hours of a solid meal, or within two hours of drinking fluids. Great care should always be taken with children or pregnant women who are apt to retain food in their stomachs for many hours, especially when they are in pain or apprehensive. The bladder should be emptied immediately before anaesthesia.

Premedication is not required by the majority of patients. Many patients who are in pain will have had aspirin or codein and these are useful premedicants. Phenobarbitone grs. 1 and methyl pentynol (Oblivon) 250 mg. are also satisfactory. Children may be given Oblivon elixir or aspirin; barbiturates are not recommended.

Thomas Babington Boulton

Mr. Boulton entered Bart's in 1946, after spending his preclinical years at Emmanuel College, Cambridge. On qualifying he was appointed House Surgeon to Mr. Hosford. Since then he has become F.F.A.R.C.S., and is at present Senior Registrar Anaesthetist at this hospital. Mr. Boulton saw active service in Malaya, and was mentioned in despatches. He has just sailed to America, where he is spending a year, (*June Journal*).

as they tend to make children restless or refractory.

A patient who walks into the surgery in a normal manner, and who does not volunteer a history of organic disease, may usually be considered fit for a short dental anaesthetic with nitrous oxide.¹ The practice of 'examining' the patient by a brief application of the stethoscope to the apex-beat serves no useful purpose and may only cause doubt in the patient's mind; the value of such a procedure as a defence in a court of law is also open to doubt. If, however, the patient volunteers a history of organic disease or asks for a 'check-up' an examination should be carried out.

The psychological approach of the anaesthetist to the patient is of great importance. All apparatus, both dental and anaesthetic, must be ready and as unobtrusive as possible when the patient enters the surgery; noisy changing of cylinders, etc., may create the impression that 'something is wrong with the machine' and destroy confidence. A smile and a word of encouragement from the anaesthetist allays the patient's anxiety and may make all the difference between a good anaesthetic and a complete shambles.

The position of the patient is of prime importance; a patient who is uncomfortable may be difficult to induce and, if the head is in the wrong position, great difficulty may be experienced in keeping a clear airway. The chair should be tipped slightly back so that the patient does not slip down during anaesthesia. We do not use a strap as we think that it gives the patient an impression of being tied down. The patient must sit well back in the seat with the cervical and dorsal spines in a straight line. The head should be slightly extended at the atlanto-occipital joint and the nape of the neck must rest firmly on the neck-rest. The feet should rest comfortably on the foot-rest. The patient is asked to interlace his fingers; this is a precaution against clawing at the mask during the excitement stage. The dental prop. is inserted by the surgeon.

INDUCTION AND MAINTENANCE OF ANAESTHESIA.

The signs of anaesthesia observed during the administration of nitrous oxide differ from those observed during the administration of other general anaesthetics, such as

ether, because of the concurrent anoxia and the fact that nitrous oxide does not cause relaxation.

The stage of induction lasts from the start of the administration to loss of consciousness. The patient is asked to close his eyes and relax. The machine is set for the administration of 100% nitrous oxide. A gentle flow of gas is produced by setting the pressure control. The tension spring on the mask is set so that gas just does not escape at the set pressure. The mask is held half an inch from the patient's nostrils and the patient is told to inhale through the nose. Throughout the induction the patient is encouraged by the anaesthetist in simple terms. This is very important as, if all is silence, the patient may suddenly lose confidence and start to struggle because he thinks that the dental surgeon may be about to begin operating. Good dental anaesthesia is often partly hypnosis, the patient may be practically talked to sleep by simple suggestion made in a quiet voice. It is a good thing to keep on repeating "breathe through your nose" as this is the single most important factor in a smooth induction and, at the same time, it gives the patient something definite to do, thus diverting his attention from his anxiety.

The eye-lash reflex is the first eye reflex to disappear. This is elicited by touching the eye lash very lightly; when this stimulus no longer causes contraction of the orbicularis oculi the patient is almost unconscious. The mask may now be lowered on to the face to fit closely round the nose, so that the valve on the mask may be heard to hiss with each respiration. The tubes leading to the nose piece are held between the first fingers, and the thumbs and other fingers are held under the angles of the jaw to ensure a clear air-way.

The stage of excitement is entered immediately the eye-lash reflex has disappeared. This stage represents the release of the patient from conscious control. The patient may react violently to stimuli, such as the premature application of dental forceps. A patient who has concealed his nervousness may suddenly start to struggle when his conscious control is lost; one should always beware of the young man who breezes into the surgery with a forced gaiety and some such remark as 'Going to give me a spot of gas, Doc.?' These individuals often struggle violently when self discipline is re-

moved in the stage of excitation. In this stage a patient may often suddenly start to mouth-breathe. The hand or other imperious object should never be used to encourage nasal breathing as this may lead to the patient getting the sensation that he is being suffocated. If a patient is a persistent mouth-breather a piece of gauze should be touched on the lips, or a Trewby mouth-piece, which supplies a flow of gas, should be employed. The eye-lid reflex (a contraction of the orbicularis oculi when a gentle attempt is made to passively open the eyes), remains present throughout the stage of excitation and the respiration is usually irregular.

The stage of surgical anaesthesia is reached at the moment that the respiration suddenly becomes regular, at this stage there is often a slight catch in the respiration as the tongue falls back for an instant. The eye-lid reflex is now negative, the eyes can be easily opened with the finger. The eyeballs at first oscillate to and fro and then become fixed in a squint due to the onset of anoxic spasm of the small muscles of the eye.

The patient is now ready for surgery. 5 to 10% oxygen can be introduced. If the administration of 100% nitrous oxide is continued, jactitations due to anoxic spasm of other muscles of the body may occur. These consist of irregular twitching movements which are purposeless and usually start in the extremities. They are an indication for oxygen and must never be confused with purposive movements, such as clawing at the mask, which are seen in the stage of excitation; these latter movements are, of course, an indication for deepening anaesthesia.

Cyanosis is not a sign of anaesthesia. The existence of cyanosis depends on an absolute amount of reduced haemoglobin in the blood. This amount is about 5 Grams per 100 c.c. so that a patient with a 33% haemoglobin can never become cyanosed, while a plethoric individual can become very cyanosed while still retaining an appreciable amount of oxy-haemoglobin in the blood.¹

THE EXTRACTION OF TEETH

The gauze swab is inserted by the anaesthetist or by the surgeon according to preference. The tongue should be packed away from the side on which extractions are

to be made. Counter pressure for the lower teeth is provided by the anaesthetist's fingers under the angles of the jaw and for the upper teeth by pushing the head against the anaesthetist's body. If the tooth is difficult and the patient is becoming light the surgeon should desist for a moment to allow the anaesthetic to be deepened, this always saves time in the end. The surgeon should take care not to obstruct the air-way by pushing the tongue or pack back into the pharynx. At the end of the operation all debris, the pack and, if possible, the prop, should be removed; this is the joint responsibility of the surgeon and the anaesthetist. If the surgeon requires to extract teeth from both sides of the mouth at the same session the mouth-gag is used in the opposite side to the prop, which is then removed.

SPECIAL CASES

Children. It is usually best to ask the mother to remain outside. The trilene supplement technique is satisfactory. The mask should be held away from the face until the child has definitely lost consciousness. If possible the child is carried out to the waiting parent in the recovery room before consciousness is regained.

Diabetics are best given their normal breakfast and normal morning insulin and anaesthetised mid-morning. There is thus no danger from a full stomach and the patient recovers in time for the next meal.

Oedema of the glottis. Patients with trismus, oedema of the floor of the mouth and glottic obstruction are unsuitable for out-patient anaesthesia and should be admitted to hospital.

OTHER ANAESTHETIC AGENTS

Thiopentone. Apart from its use as a sleep dose we do not consider this drug suitable as a single-dose anaesthetic for dental work. It has the following dangers: respiratory arrest due to depression of the respiratory centre, laryngeal spasm, inhalation of debris and obstruction due to the tongue because of relaxation of the lingual and pharyngeal muscles, depression of the blood-pressure, especially in the erect posture which may lead to syncope and even cardiac arrest. Facilities for endotracheal intubation and artificial respiration with oxygen should always be at hand when thiopentone is administered.

*Cyclopropane.*² This cannot be administered satisfactorily with the ordinary nitrous oxide-oxygen machine. A Boyle-type apparatus is required. Cyclopropane is explosive even, perhaps, to the sparks from teeth unless administered with a special 50:50 mixture of nitrogen and oxygen.⁶ Recovery is rapid, but the patients are apt to be more nauseated than after nitrous oxide.

Ethyl chloride on an open mask is a useful anaesthetic for small children, but it is more unpleasant to inhale than nitrous oxide and an ethyl-chloride induction may leave a lasting frightening impression on a child's mind. It has the disadvantage of being a single-dose anaesthetic. It does produce good relaxation of the jaw, which is an advantage when a child does not tolerate a prop before induction.

Vinesthene has the same advantages as ethyl chloride. It has the additional disadvantages that it is expensive and requires a special inhaler (Goldman's or the Oxford modification).

THE RECOVERY

When the operation is over it is best to give a few breaths of oxygen before removing the mask. If the prop has not been removed during surgical anaesthesia it should be left in place until the patient is conscious, otherwise he may interpret its removal as the extraction and say that he 'felt' it. Similarly the adjustment of a skirt during recovery has led to brief erotic dreams with possible unfortunate legal consequences. During recovery the head should be held forward if blood and saliva is likely to accumulate in the back of the throat and obstruct the air-way.

Slow recovery from a 'gas' is rarely due to anoxic damage to the brain. Certain reports² which are often quoted of permanent cerebral damage following nitrous oxide refer to a now outmoded technique known as "secondary saturation," which attempted to produce relaxation for general surgery with nitrous oxide and prolonged asphyxia alone. If a dental operation proceeds for some time (say over five minutes) it is surprising how much oxygen can be introduced, often over 15%. One cause of apparent failure to regain consciousness is hysteria.³ The patient, often a young woman, rapidly regains her normal pink complexion, but

remains flaccid and apparently comatose. Simple suggestion, such as talk about injections, often rouses these patients.

THE USE OF SUPPLEMENTS

*Trilene.*⁴ The patient is induced as above until the mask is lowered on to the face. The trilene is then introduced and the machine immediately set at 7 to 10%. After a few breaths the oxygen can usually be still further increased.

Thiopentone is given in a 'sleep' dose of 100 to 200 mg. and anaesthesia maintained on 80 to 90% nitrous oxide. This technique is particularly useful for resistant individuals.

HYPNOSIS

This technique is becoming increasingly popular with the dental profession. It is particularly useful in the induction of children.² It may be used alone in certain susceptible individuals or as a preliminary to general or local anaesthesia. It must be stressed that anaesthesia sufficient in itself for extraction, requires considerable hypnotic depth and this can only be attained in a minority of patients. Sufficient depth to allow painful fillings to be carried out is more easily obtained, especially if the patient has to make several visits as, within limits, repeated hypnosis enables a greater depth to be reached.

The administration of dental anaesthetics requires skill and practice, above all, it is necessary that the anaesthetist should be in complete control of the situation from the moment the patient enters the surgery; it is only in this way that the patient's confidence will be gained and tranquil and pleasant anaesthesia result.

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NURSES OFF THE LEASH

by ROSEMARY STOCKEN and ANGELA HARVEY.

FOUR OF US crossed the Channel from Folkestone by overnight ferry. This enabled the inexperienced driver of our Morris Minor to practise driving on the right hand side of the road before much traffic appeared. Half-asleep, we drove along the wet cobbled streets and out on to the dull, straight road extending for miles across the undulating plains of Northern France. Unexpectedly, little difficulty was experienced with right-hand driving, and before long we were able to compete with the speed of the French drivers, taking our corners on two wheels.

Dunkirk in the drizzling dawn spurred us on to Dijon, where we spent a grim first night at the so-called 'Youth Hostel'. Already Spring was giving us new thrills as we advanced further south; miraculously the blossom came out, the cypress trees appeared, and we passed through the colourful vineyards of the Cote d'Or. Then up the Alpes Maritimes: the snow had only recently been cleared from the Col du Bayard, and the panorama of snow-clad mountains all round was magnificent. Unaccustomed to such steep gradients and hairpin bends, the car brakes finally gave out, and it was some time before we could get them relined at a French Riviera garage. However, we crossed over the Basses Alpes, *et voilà*—we were in the midst of the exotic flowers, giant cacti and palms of the Riviera; eyeing greedily the luscious-looking oranges and lemons that hung temptingly from the trees bordering the road.

After scorching in the brilliant sunshine of Cap d'Ail and Monte Carlo, we pressed on into Italy. Disgruntled French Customs officials compared unfavourably with the sleek, dark Italians. Scarcely had we driven up to the frontier than we were invited out dancing that evening; four young English girls were too much of a good thing! That was typical of the reception we had throughout our stay in Italy. Hilarious Italians escorted us on motor-scooters, in cars, lorries and even coaches, forever blaring their raucous horns endeavouring to attract our attention. We waved graciously from our

open car feeling nothing less than Royalty!

Bordighera was our first stop in Italy. Here the hills rise steeply from the sea and are terraced with carnations. The Youth Hostel was at the summit of one of these hills overlooking the sparkling blue bay. Colonies of croaking frogs, living in the water tanks, were our only neighbours. They tuned up at twilight and by midnight were in the full-throated chorus of a passionate cantata. We said goodbye to the frogs, and drove along the Riviera coast road over the Ligurian Alps on to Lerici in the Gulf of La Spezia.

Lerici is proud of its large castle built on a promontory overlooking a small, attractive harbour, its clear blue-green sea studded with fishing boats and brightly coloured yachts. We were somewhat amazed when told that the Youth Hostel was *il castello* itself. Up and up the dark, dank steps with only a glimmer of light piercing the narrow slit windows in the 4 ft. walls; suddenly we were in brilliant sunshine, the Hostel being on the ramparts. The castle's oldest inhabitants were the ghosts of Sesame and Henry V of France. The view from the flag tower was superb; at night the glow-worm boats of the octopus-catchers twinkled in the bay.

Here we had some very hot weather, and good bathing. But these Italians! We were sunbathing peacefully one day, at a cove accessible only by sea, when our blissful quiet was shattered by boat-loads of fiery Italian youths. Language was no problem, and they insisted on taking us for a sail in their Star Class yachts.

It was sad leaving the Mediterranean shore, but to be in Florence at Easter was

Miss Rosemary Stocken

Born and brought up in Plymouth, Miss Stocken came to Bart's as a student nurse in April, 1952. She became S.R.N. in June, 1955, and is at present a blue belt on Smithfield Ward.

Miss Angela Harvey

Miss Harvey came from Brighton to train at Bart's in March 1952, and became S.R.N. in June 1955. She is studying for her midwifery diploma at St. Andrew's, Fife.

compensation enough. We were driven over the cobbled streets in an old horse-drawn brougham, hoping to capture something of the atmosphere.

Then to Venice with its gay markets and crowded waterways. Gliding in a gondola, we listened fascinated to the deep call of the gondolier, and watched the gentle rhythm of his body as he steered us skilfully round each narrow bend in the darkness.

From Venice through the Val Sugana bordering the Dolomites, to Riva, on Lake

Cooking did not present much of a problem as we had our own small methylated spirit stove and bought food as we went along. How well we remember those long, narrow, deliciously crisp loaves, bought literally by the metre; the ripe cheeses that left their aroma in the car for days afterwards; the freshly gathered oranges; the inevitable Italian macaroni and salami; and, of course, the wine.

We were determined to go to Zermatt on our way back for some skiing, and this



Josephine Iliff, Angela Harvey, Audrey George and Rosemary Stocken

Garda—a lakeside town full of trinkets and straw hats. Our ukelele provided us with a sing-song on the jetty and drinks all round! The lakeside road along the western shore is noted for its tunnels through the enormous cliffs that rise almost vertically to a great height above the lake.

Lake Como was calm and peaceful when we arrived after a grillingly hot and exhausting day visiting Milan. We stayed at the very good Youth Hostel at Lecco, and it was with amusement that we read the notice "Dear Wanderer, when you come to this Home, please report to the Father"—especially when the 'Father' made advances to one of us as soon as we had presented ourselves! The hostels were certainly varied: in France, we were once given a warm welcome at what we thought was a hostel, but which turned out to be a maternity home.

meant crossing the Alps by one of the higher passes, as very few are open to traffic in early April. We chose the superb Maloja and Julier Passes, which had only just been cleared. It was a wonderful experience in the clear, exhilarating atmosphere of a brilliantly sunny day, to climb steadily upwards from the green valley of Chiavenna, through the pinewoods and past rushing waterfalls. Each hairpin bend seemed more acute, and the gradient more alarmingly steep, and we thought that at any moment, two, if not three, of us would have to plod up on foot instead. We had several minor skids, and our hearts sank somewhat on seeing other cars that had been stuck in the snow, or had skidded into the drifts. But we came through with only a smashed rear light, and spent the night near Oberalp.

Oberalp Pass is closed to traffic until June so we had to drive via Zurich, Lucerne, Interlaken, Kandersteg and the Lotschen Tunnel in order to reach Zermatt.

We drove the car on to a railway truck safely hitched on to the rear of the train, but before we had time to board the passenger compartment ourselves, the train was moving off, and in absolute horror we stood on the railtrack watching our precious car, plus all we possessed, disappear into the darkness of the tunnel—without us. Those were awful moments, as the train was the last stopping train that day, and it was imperative that we caught the last train to Zermatt from St. Nicklaus. However, by bribing the Station Master, we persuaded him to telephone Berne, and arrange for the next express train to be stopped for us. This he did, and whilst we boarded it ignominiously, we heard him and the guard having a 'few words' at the rear of the train.

We were much relieved to see the car shunted on to a siding at the far end of the tunnel, but from there we had a hair-raising descent of some 2,000 ft. to the Rhone Valley. It was an incredibly steep and winding mule track, cut out of the face of the mountain, with nothing between us and certain death. We hugged the nearside of the track, clung nervously to our seats and dared not look down to the valley far below.

Thankful that our brakes had been so recently relined, we reached the valley safely, sped along to Visp, and then raced the Zermatt train to St. Nicklaus, where we just caught it. Our stay in Zermatt was not the success it should have been as the skiing just then was unusually poor. So, much bruised and slightly disappointed, we started homeward. The return journey was uneventful but for our running out of petrol one evening, several kilometres from any garage. We were rescued eventually by a young Frenchman in his Citroen, who towed us unconcernedly at 60 m.p.h., at the end of an old, frayed and oily lobster-pot rope that we had found in our boot. It snapped outside a garage 7 km. onwards, when we and the French driver chose different times to brake. We passed our last night on the Continent at Arras, another place best not remembered. Our remaining francs went on wines and cheeses purchased in Boulogne just before embarking on the ferry. With these to fortify us, we cheerfully went back on to the leash.

SOCIETIES

ABERNETHIAN SOCIETY

One of the best attendances at an Abernethian Society meeting since the war, was attained when Dr. Vivian Fuchs spoke on the subject of the Commonwealth Transantarctic Expedition.

Dr. Fuchs introduced his lecture by apologising for being, as he put it, a 'bogus doctor.' He continued by emphasising the scientific nature of the expedition, saying that it was unfortunate that the press had occasionally reported him as denying this.

Dr. Fuchs then went on to explain, with the aid of some excellent colour transparencies, the way in which the ice-breaker "Theron" had drifted in the pack ice of the Ross sea, during the recent expedition to establish a base camp. From this camp the polar ice cap would be crossed. He described much of the equipment which would be used by the expedition, and showed pictures of the type of country over which it would have to be used. Dr. Fuchs also mentioned the medical care of the expedition which was in the hands of Dr. Rainer Goldsmith, a Bart's man (see *January Journal*).

Dr. Fuchs showed slides of the establishment of the antarctic house. He ended his talk on a cheerful note by indicating that the party wintering at the base were in good spirits. He said that, although they had lost a very large quantity of stores, including all their coal, the messages had all been cheerfully worded. The first had said simply, 'All well.' This was soon followed by others stating that the temperature was -60° F., 'Paraffin not quite congealed.' The members of the advance party urged those at home to disregard any 'scare' newspaper reports. They may not be comfortable, but they will be able to last through the winter.

PHYSIOLOGICAL SOCIETY

The following is a report of the meeting of the Society held on May 28, when mem-

bers of the Physiology Department spoke on their personal research.

PROFESSOR K. FRANKLIN considered his more recent research as falling into two phases: that which he had started in Oxford, which he termed 2-D; and the problems which he had started since coming back to Bart's, termed 3-D, because they included the dimension of time. This latter was part of the Nuffield Research Unit project on ageing. The earlier work concerned the investigation of blood flow through the kidneys during asphyxia, and the demonstration of the contraction of the interlobular arteries. This led on to records being taken of blood pressure in the uterus during parturition, and the relation of water intake and urine output in pregnancy. This was the first time that such measurements had been published in this country.

DR. D. A. McDONALD gave a brief account of his work on the measurement of flow along pulsatile blood vessels. The method that was employed involved the photographing of injected bubbles of oxygen travelling along the arteries, this required the use of a high speed camera (which had in fact been used in studying falling cats. See *Journal*, August, 1955). The flow was found to be not at all constant, and after an acceleration during systole, there was often a reverse flow during diastole, especially in the larger arteries. If pressure was measured simultaneously, it was discovered that the flow bore a mathematical relation to the pressure, such that differentiation of the pressure gradient produced a curve very similar to that obtained from direct flow measurements. This meant that, for the first time, flow could be predicted from pressure measurements alone.

MISS ULLMANN commenced by stating that one of the reasons she agreed to participate in the meeting was that she was in need of volunteers to act as experimental subjects. She felt it was only fair that prospective 'guinea pigs' should know for what their services were required. The research began as a study of kidney function under conditions of low blood oxygen tension. The diuresis of alkaline urine, which resulted under these conditions, was at first explained as being due to a respiratory alkalosis, brought about by hyperventilation. However, if the alveolar carbon dioxide were kept constant, the urine was still alkaline, and

there was still considerable diuresis. One explanation was that there might be volume receptors in the blood vessels of the chest, leading to reflex changes in the kidney during hyperpnoea.

DR. WIDDICOMBE discussed his work on other receptors in the lungs, the pulmonary stretch receptors, which form the afferent receptors for the Herring-Breuer reflex. These receptors have now been shown to be located in the smooth muscle of the bronchi, mainly at their points of branching. He thought that these receptors were involved in some mechanism for controlling bronchial tone, and that they were concerned with a possible optimum rate of breathing. Work is in progress with Dr. Marshall, who is on the Medical Professorial Unit, on a study of optimal breathing rates in man.

DR. AUMONIER introduced the demonstration he had set up. This included an interference contrast microscope, used by him for measuring the total protein content of muscle fibres from animals infected with Cocksackie virus; and a planometer and projector used for measuring the average thickness of the mucous membrane of the gums. These latter were employed in his research on the hyperplasia of gum epithelium brought about by brushing.

NATURAL HISTORY SOCIETY

In February Mr. James Fisher spoke to a large audience on the Birds of Britain. He gave an account of the work of ringing, which enables a survey to be made of migratory habits. Especially fascinating was the description of the startling spread of the Fulmer which, 70 years ago, was confined to a Scottish islet, and now is to be found all over the British Isles.

More recently a party was taken on a conducted tour of the London Zoo by Professor Cave. The willowy giraffes made excellent subjects for a discussion on deglutition, while their more toothsome neighbours, the hippopotami, were very co-operative in allowing their teeth to be used as a topic for instruction. The raucous wheedling of a parrot for a pencil was reminiscent of certain spoilt children, but much more entertaining. The outing provided many opportunities for the photographers.

SAINT BARTHOLOMEW AND HIS ASSOCIATIONS

PART I: RELIGIOUS

by J. B. DAWSON

PATRON SAINT

FROM THE story of his flaying, the reason for all leather workers adopting St. Bartholomew as their patron saint becomes evident. Thus tanners, butchers, bookbinders, glove-makers, cobblers, tailors, plasterers, and in Florence the Guild of Salt, Oil and Cheese Merchants, all supplicate his protection. In Rome there is a church of St. Bartholomew of the Tanners, the dedication of which was granted by St. Pius V to the Corporation of Tanners and Curriers on account of its proximity to their artisan shops. The reason for plasterers adopting Bartholomew is not obvious. However, many quaint and touching customs have become associated with all the details of the Saint's life.

PILGRIMAGES AND MIRACLES

As an example of pure piety, there was a pilgrimage to Montcoutant in the diocese of Poitiers, to reverence an altar and tableau of St. Bartholomew.

There is another devotional tradition in which the mothers of the small parish of Archambaut carried their newly-born to the chapel of St. Bartholomew in the village of the Martrais.

Bartholomew is invoked to encourage theological upbringing in the town of St. Pardoux. Here, on the fete day of the great saint, little children about to make their first communion are taken to church for an introduction to the gospels of the New Testament.

A more recent ritual involving St. Bartholomew is mentioned by Dr. Pickles in his epidemiological classic. He writes: 'Every year the inhabitants of one of the villages, with due solemnity and ritual, burn the effigy of their patron saint, "Old Bartle"; and a large gathering from all the district roundabout assists at the ceremony'. The district where this takes place I assume to be in Wensleydale, Yorkshire.

It used to be the custom at the Abbey of the Isle of Croyland in the See of Lincoln, to distribute little knives, presumably modelled on those used for flaying, to all visitors on August 24th, the accepted fete day of St. Bartholomew. Apparently one can still find some of these knives lying amongst the monastery ruins, and on the banks of the nearby river. The monks carried on their habit a shield of three knives crossed with three martlets (hammers). A similar escutcheon bearing three knives is quite often found in association with St. Bartholomew. I have seen it in Reading, at Orford in Suffolk, and in St. Bartholomew the Great.

Two examples of the saint exerting a spiritual power in his own right now follow. The first describes 'a woman who brought a vessel full of oil to replenish a lamp burning to St. Bartholomew; however much she inclined her vessel to pour out the oil it would not issue forth. And then one cried, "I trow this oil be not agreeable to the apostle that it should be in his lamp." Wherefore she put it into another lamp and it issued anon.' The second example comes from a book of saintly miracles, and tells how 'a certain master hallowed solemnly the feast of St. Bartholomew. And the devil, in the form of a maid, appeared to this master that preached. And when he saw her he bade her come and dine with him, and when they were set at the table she enforced him much to draw him to her love. And the St. Bartholomew came to the gate and prayed that he might come in for the love of St. Bartholomew, and she would not, but sent him bread, and he would none take, but prayed the master by his message that he should say what thing that he supposed was most proper in a man. And he answered, "To laugh." And the maid said, "Nay, it is sin in which man is conceived, born and liveth." And St. Bartholomew answered that he had well said, but she had more profoundly answered. And the pilgrim demanded that of the master, "Where the

place was containing the space of a foot where God made the greatest miracle." And he said, "The sign of the Cross, in which God had made many miracles." And she said, "Nay, it is the head of a man, in which the little world is." And the apostle allowed the sentence of that one, and of the other, and then he demanded the third time, "How

Finally, one finds after 'The Legendary of Autun' in France, that St. Bartholomew was invoked as a powerful mediator of great storms, and as patron saint of blacksmiths. The reason for this is said to be that August 24th was a holy day of the god Vulcan, and gradually Bartholomew, which apparently signifies *filius suspendentis aquas*, replaced



*The painting of St. Bartholomew by Goya
Showing the Saint subjugating the Devil, he holds a flaming knife*

far is it from the sovereign seige, or seat in heaven, unto the lowest and deepest place of hell." And the master said that he wist not, and she said, "I know it well, for I fell down from that one to that other, and it behoveth that I show it to thee." And the devil fell down into hell with a great bruit and howling, and then they sent for the pilgrim and he was vanished and gone away, and they could not find him."

the god of fire. This connection might also be related to the coming ashore of the sarcophagus of Bartholomew at Lipari, the site of 'The Forges of Vulcan', a volcanic mountain group.

CHURCH DEDICATIONS IN ENGLAND

There are a great number of churches dedicated to St. Bartholomew in England; one hundred and forty seven pre-reformation

churches, three chapelries of doubtful period, three eighteenth century, ten early nineteenth century and twenty-four late nineteenth century, making a total of one hundred and eighty-seven. But many have ceased to exist, such as St. Bartholomew by the Exchange, which was demolished in 1841, and yet other new churches have been built, for instance, I have seen a new red-brick church in Reading with the characteristic shield of Bartholomew outside its doors, and another church was named after the saint in 1939 in Binley, Warwickshire.

I feel, however, that not all of these can be accepted as fostered by our great St. Bartholomew. In Europe there have been many saints of this name; in England, during the twelfth century, lived a Yorkshireman who travelled to the island of Farne, off the coast of Northumberland, where he adopted a hermitic life. Sir Norman Moore, the historian of our hospital, describes this St. Bartholomew as living in an 'odour of

sanctity.' There was one church officially dedicated to him at Lindisfarne, but I expect that many of the Yorkshire dedications were made in his name. The Rector of St. Bartholomew at Orford suggests that his very fine twelfth century church may have been inspired nominally by one Bartholomew de Glanville, who was associated with Wimar the chaplain in its building. The churches in and around Kent may safely be attributed to St. Bartholomew as a result of the relic brought by the Bishop of Benevento to Canterbury. This act also inspired hospitals to minister to the sick in the name of Bartholomew in the eleventh and twelfth centuries. Chatham (1087), Dover and Rochester, all had such hospitals, the latter being reserved for lepers. And a small, but very fine, leper hospital at Bartlemas, Oxford, is still standing. This originally belonged to Oriel College. Here there is the characteristic sloping floor, which facilitated scrubbing down, found in these buildings.

STAFF GOLF MATCH

THE ANNUAL golf match against the staff was played on Wednesday, May 16th, on the Denham Golf Course and ended in a win for the staff by eight matches to six with one game halved.

The staff match traditionally starts with lunch and so the players of both sides left the square soon after midday to observe this excellent custom. Nor were they disappointed, for the Denham catering was once again quite admirable and both teams did full justice to it.

This year the students were conceding three *bisques*, and the methods of best employing this handicap were fiercely debated on the staff side. Opinion seemed to vary. Dr. Graham led a school of thought which maintained that the handicap should be claimed as soon as possible, on the theory that to be 3 up with no *bisques* left was better than to be level with all three in hand. Dr. Hayward and his followers on the other hand, thought that the psychological effect on the opponent of three *bisques* yet to be brought into play against him, would be enough to cause him to top his approaches into gorse bushes, and to miss the shortest of

putts. The ensuing play did not help resolve the problem, for followers of both schools won with equal ease; so one supposes that next year the debate will be fiercely resumed. Perhaps Dr. Strauss might be able to decide the point?

Now for the match itself. A golf course covers a large area and all the strokes



played in each match cannot be seen, especially when your correspondent is engaged in combat himself. Consequently the follow-

ing account has had to be built up partly from players' descriptions and partly from observations made when the geography of the course allowed; it is hoped that justice will be done.

In the top match Dr. McLlroy's local knowledge proved too much for Scorer, who was defeated far from home. The students'



biggest cannon had exploded with the violence of a damp squib, but rumour had it that Dr. McLlroy had been practising, and so almost violating the rules of this contest!

The staff went further ahead in the second match, when Mr. Fiddian beat Deering in a close match. The next two matches saw the score levelled. Galbraith beat Dr. Graham and White beat Dr. Shooter. Dr. Graham's experience of this encounter now goes back for more than 30 years and it is a great tribute to his skill and enthusiasm that he still plays so near the top of the order—an example, might one suggest, to be followed by some former pillars of the staff side who appear to have gone into a somewhat premature retirement from the fray! The students went ahead in the third match when Dr. Borrie was narrowly defeated by Bloomer. Despite the fact that his pullover of the brightest yellow put the very buttercups to shame, Dr. Borrie was just vanquished on the last green. The students' last success came in the sixth match, when Stevenson played excellent golf and beat Dr. Murrell with something in hand. From now on the staff forged ahead. Because one of their number failed to arrive, Dr. Thomas, for the staff, was asked to take on both Hughes and Mackenzie. Undismayed by this apparently additional handicap, Dr. Thomas proved more than equal to the task, and in the end

levelled the match for the staff by returning in triumph to the clubhouse with both points securely won. The last three points went to the staff. Dr. Draper beat Batterham in the ninth game and Dr. Morgan, who happened most fortunately to be on leave from his appointment in Khartoum, played very well indeed and gave poor Rhys Phillips no chance of raising his head. Finally, Dr. Hayward, leading his regiment from behind, as it were, timed his effort to perfection, and won at the home hole—and this, despite the fact that his clubs had last been used in the corresponding match a year ago! Nor did he deem it necessary to abandon his pipe during play.

With a lead of three games, the staff went out in confident mood after tea for the four-somes and the students could do no more than get one match back. Two of the afternoon winners, Bloomer and Galbraith, were defeated by Drs. Borrie and Graham, but Deering and Batterham turned the tables on Mr. Fiddian and Dr. Draper. White and Scorer beat Drs. Shooter and McLlroy and finally Rhys Phillips and Mulcahy halved with Drs. Hayward and Morgan.

The full results were:—

Singles

0	M. J. S. Scorer lost to Dr. McLlroy	7 & 5	1
0	R. B. Deering lost to Mr. Fiddian	3 & 2	1
1	A. W. Galbraith beat Dr. Graham	5 & 4	0
1	H. J. O. White beat Dr. Shooter	5 & 3	0
1	A. C. Bloomer beat Dr. Borrie	1 up	0
1	C. Stevenson beat Dr. Murrell	6 & 5	0
0	R. C. G. Hughes lost to Dr. Thomas	3 & 1	1
0	J. C. Mackenzie lost to Dr. Thomas	5 & 4	1
0	E. J. Batterham lost to Dr. Draper	6 & 4	1
0	D. Rhys Phillips lost to Dr. Morgan	8 & 7	1
0	D. Mulcahy lost to Dr. Hayward	1 down	1

4

7

Foursomes

0	Bloomer and Galbraith lost to		
	Dr. Borrie and Dr. Graham	2 & 1	1
1	Deering and Batterham beat		
	Mr. Fiddian and Dr. Draper	1 up	0
1	Scorer and White beat		
	Dr. Shooter and Dr. McLlroy	2 & 1	0
1	Rhys Phillips and Mulcahy halved		
	with Dr. Hayward and Dr. Morgan		

2½

1½

The staff 8½, beat the students 6½, by two matches.

The members of the students' golf club would like to express their appreciation to the staff side for a most enjoyable day and to Dr. Hayward in particular for organising the occasion once again.

HOSPITAL REGATTA

THE Hospital Sailing Regatta was held on Wednesday, Thursday and Friday, 9th, 10th and 11th of May. For those who travelled down to Burnham by car, the trip was a pleasant one with clouds of blossom being blown from the cherry trees along Eastern Avenue. The wind-driven blossom provided a hint that the three days were not going to be calm.

Although the weather conditions limited our activities, everyone had their fair share of sailing. A record total of fifty-five members stayed for some, or all of the three days. Because of the weather, only one race was sailed, but there was no lack of enthusiasm to snatch the periods, when the wind abated somewhat, to go out cruising.

On the Thursday evening, a diversion was provided by the wind dropping completely and leaving three boats temporarily stranded on a rising tide some distance up the Crouch. However, if any of us were worried as to the fate of their occupants, we were reassured by the arrival in the bar of the Anchor Inn, of a mud-covered and shoe-less messenger, who

told us that she had been put ashore from the secretary's boat on supposedly dry land.

On the Friday morning, all nine boats were raced for the Commodore's Trophy. The race proved a most exciting one, the condition of the wind and tide giving ample opportunities for making a mistake, or snatching an advantage. All the crews behaved like tried seamen, and even those detailed to bail appeared to enjoy their task. There were one or two anxious moments in the heavy sea at the mouth of the Roach, but it is to the credit of the helmsmen that no capsize occurred and no damage was done. After a duel with Martin Hayes during the last beat up the Crouch, Henry Blake reached the finishing line first; thus winning the Commodore's Trophy for the second consecutive year.

The club dinner was held in the congenial surroundings of the Ship Inn. We were very pleased to welcome one of our Vice-Commodores, Mr. Cambrook, and our Rear-Commodore, Mr. Alment, to this function. The former presented the prizes.

A LA TRICYCLETTE

The following letter was received by the Clerk to the Governors. We are uncertain as to the seriousness of the suggestion, but if adopted, we look forward to interfirm races for the entertainment of the patients.



Dear Sir,

Having seen the film 'The Feminine Touch' depicting how nurses suffer with too much work and painful feet from too much standing and walking about, why not allow nurses in Hospitals to use a sort of simple wooden tricycle with a tray in front to use up and down wards and also threequarter trousers for added comfort?

Yours truly,

A FOOT SUFFERER.

SPORTS NEWS

VIEWPOINT

SINCE assuming the captaincy of the Rugby Football Club two seasons ago, John Tallack has done much for the Club. It is indeed fair to say that its success during this period, which has been far greater than at any other time since the War, has come about almost entirely by his untiring efforts, on and off the field. The achievements of the Club have been reported in the *Journal* month by month, and need not be discussed in detail here. We would like to take this opportunity of expressing the gratitude of the Hospital to Tallack, now that his term of office has expired. We trust that the new captain, J. C. Mackenzie, will continue the good work, and we wish him every success.

As a permanent contribution to the Hospital, Tallack is compiling a history of the Club, which is due to be published in March 1957. It is certain that old Bart's rugby men will find many hours of enjoyable reading in this book.

So far this season the Tennis Club has not enjoyed outstanding success. The increased support that will be given to the captain, J. T. Beach, by the return after a long illness, of the vice-captain, C. S. Goodwin, will surely help revive the fortunes of the Club.

RUGBY

ANNUAL GENERAL MEETING

This was held on Tuesday, 22nd May, with the President, Dr. Scowen, in the chair. The retiring secretary, Mr. Badley, told the meeting that although the 1st XV record was not as good as last year, it was still the second best since the war, and might well have been the best if it had not been for a bad period after the February freeze-up. He praised the retiring captain, Mr. Tallack, for his work in raising the standard of Bart's rugby during his two years as captain. Mr. Tallack then thanked everyone for the support they had given him. He mentioned the poor end of the season as a warning of what could happen if training were allowed to slip. He suggested that it was a bad policy to ask anyone to captain the Club for two successive seasons. History, and his own experience, showed that things never went as well in the second season.

The President, and a distinguished list of Vice-Presidents were re-elected unanimously. The following were elected for the 1956-57 season:—

Captain, J. C. Mackenzie.
Vice-Captain, R. M. Phillips.
Secretary, C. J. Carr.
Treasurer, C. A. C. Charlton.
Pre-Clinical Representative, A. P. Ross.

CRICKET

1st XI v. U.C.H. (Cup Match). Thursday, May 17th. Won by 6 wickets.

U.C.H. won the toss and chose to bat on a wicket with a little moisture in it of which Garrod took full advantage, taking their first two wickets very cheaply. From this unpromising start U.C.H. really got down to it and although never getting on top of the bowling scored 171. Whitworth bowled well and Garrod suffered his inevitable misfortune of being just too good for the batsmen to get an outside edge.

Bart's lost a wicket in the first over, but Bower scored a very enjoyable 28 and paved the way for the later players. Nicholson and Whitworth saw the score to the 90's, then Nichols getting his first runs of the season edged things on, latterly assisted by the dour Marks. The match was well won with one firmly muddled, and hopes ride high for the next round.

U.C.H.: 171 (Whitworth 4 for 34).

Bart's: 174 for 4 (Nichols 51 not out. Whitworth 44).

1st XI v. Hampstead. Sunday, May 13th. Lost by 10 wickets.

The less said the better, no roses at the end. After so good a start to the season Hampstead was approached with confidence, but just like last year Kenney took those early wickets quickly and the Hampstead fielding was depressingly brilliant. The side inexplicably collapsed after Bower had promised great things.

Their opening batsmen offered one chance which was not accepted and then slaughtered the pace bowling. As one of them was the Natal opener until last year it was some consolation. In their turn, they said our fielding was the best they'd seen for some time, but then there was little else they could say.

Bart's: 64.

Hampstead: 65 for 0.

1st XI v. Romany. Sunday, May 20th. Lost by 157 runs.

A weaker side by reason of the Whitsuntide holiday, but if only those catches behind the wicket

had been held early on from Garrod's splendid opening spell, we may well have won. Bloomer had a good day with the ball, but most of the bowling, especially the left arm slower stuff, was of a most untidy length. Romany scored deliberately and consistently and then proceeded to get us out cheaply.

Their opening bowler produced two or three off cutters which were just too good and only the determined Marks batted well enough to please our welcome spectators. A very hot day on which the Captain should not have been allowed to lose the toss.

Romany : 264 for 8 declared (Bloomer 4 for 64).

Bart's : 107 (Marks 21).

UNITED HOSPITALS BUMPING RACES

The second annual bumping races were held on the evenings of June 4, 5 and 6. Bart's entered four boats. This was more than any other hospital could muster, and reflects the keenness instilled into the Boat Club by the captain, C. C. H. Dale.

The first three places remained unchanged, being occupied by St. Thomas's, St. Bartholomew's and Guy's. The best performance by the Bart's 1st VIII was on the first evening, when they came within half a length of St. Thomas's. On the following two evenings they did not look quite so impressive, but never were in danger of being caught by Guy's.

The 2nd VIII were bumped on Monday by a fast Westminster crew, which became the only crew to make a bump on each successive evening. The other two nights the 2nd VIII rowed over, thus finishing in eighth place.

Both the Bart's 3rd and 4th VIII's went ahead on the second evening, the former bumping St. Mary's and the latter Guy's 2nd VIII. This should give encouragement to the Junior VIII's in their preparation for next year's races, especially as the 3rd VIII came within a canvas of St. Thomas's 3rd boat on the last evening.

There were several unusual incidents; two oarsmen, Ormerod in the 1st VIII and Mackenzie in the 3rd VIII accomplished the difficult feat of breaking an oar apiece; the bow in the 4th VIII literally hurled himself into the boat from his car just as the starting gun boomed; and finally, the 3rd VIII managed to row a whole course with a leak stuffed up with grease.

Crews : 1st VIII, D. King, E. J. B. Makin, T. P. Ormerod, J. R. Strong, C. C. H. Dale, J. M. Besser, C. M. Hudson, G. D. Stainshy (Stroke), A. R. Geach (cox).

2nd VIII, P. Weaver, G. S. Martinez, I. K. H. Therikildsen, E. R. Gray, I. Stuart, G. Hall, P. Fenn, A. J. H. Ellison (stroke), A. Padfield (cox).

3rd VIII, A. Padfield, P. Norris, R. G. White, L. Farrow, D. A. Lammiman, J. C. Mackenzie, C. Davies, M. Burfoot (stroke), M. Scorer (cox).

4th VIII, B. Hadley, D. Birkett, J. Bartlett, B. Thom, B. P. Harold, A. Bolton, R. France, D. A. Chamberlain (stroke), J. Watson (cox).

Results :

	JUNE	4	5	6
DIVISION 1				
St. Thomas's I	...			
St. Bartholomew's I	...			
Guy's I	...			
St. Thomas's II	...			
The London I	...			
Middlesex I	...			
St. Bartholomew's II	...			
Westminster I	...			

DIVISION 2				
St. Mary's I	...			
St. Thomas's III	...			
St. Bartholomew's III	...			
The London II	...			
St. George's I	...			
London School of Economics	...			
Guy's II	...			
London III	...			
St. Bartholomew's IV	...			

WILLESDEN REGATTA

Maiden IV. Our crew had a good start, and were leading Hammersmith Town R.C. by half a length at the half-way buoy, but were unable to maintain this lead being overtaken in the last 200 yards, to lose by 1½ lengths.

Crew : R. Madley, W. R. Gray, P. Weaver, G. S. Martinez (stroke), A. Padfield (cox).

Junior Sculls. C. M. Dale beat M. L. Hicken (Lewsbury R.C.) by 5 lengths. But he lost to J. Hopkins (Sons of Thames R.C.) by 2 lengths in the final.

CHISWICK REGATTA

Junior - Senior IV. In their first race in a coxless IV the crew did well to beat Mortlake R.C. by 1½ lengths. Following a poor start the crew settled down, and were under rating Mortlake all the time as they steadily drew level. In the last 300 yards the Hospital crew away.

In the second round our IV started poorly from the stake boat and were soon 2 lengths down. They gained a little on their opponents over the latter

half of the course, but were beaten by $1\frac{1}{2}$ lengths by the Westminster Bank R.C., who went on to win the final.

Crew: D. King (bow and steers), E. J. M. Makin, J. J. D. Bartlett, J. M. Besser (stroke).

CHESS

The Chess Club, who rarely report their progress, have completed their third year in the top league of the University chess clubs. A good win was scored against University College, and London Hospital was also beaten; so, despite four losses, the Hospital team will meet the strongest opposition again next season.

There is renewed chess activity in Charterhouse Square, but it remains difficult to find players sufficiently strong for the eight board teams. Any aspirants to the Hospital team are requested to contact the secretary. A lightning tournament was held in January, and several previously unknown players enjoyed the evening, though the regular members of the team won the top places.

In the six board Pugh Cup knockout competition, the Hospital beat the London School of Economics in the first round, but have not yet played the second round. In the inter-hospital cup, Guy's, the holders, were beaten in the first round, but then Bart's lost to U.C.H., although University College, of which U.C.H. forms a part, had previously been beaten over eight boards.

The enjoyable home and away fixtures with Bromley Chess Club were continued, but the France Cup, lost three years ago, has yet to be regained.

A. D. R. Goodliffe reached the semi-final in the individual championship of the University for the second successive year.

The players this year have included: N. E. Winstone, J. M. Laurent, A. D. R. Goodliffe, A. M. Gould, R. I. Harrison, C. Allen, T. Hill, M. W. Sleight, D. Rosborough, R. France, and L. Thirkildsen.

SAILING

ANNUAL GENERAL MEETING

At the Annual General Meeting of the Sailing Club, held on the 13th May, the following officers were elected:—

Commodore, Mr. Frankis T. Evans.
Vice-Commodores, Mr. J. Cambrook,
Dr. J. Coulson,
Rear-Commodore, Mr. A. Alment.
Secretary, J. J. Misiewicz.
Asst. Secretary, M. W. Bradbury.
Charterhouse Secretary, D. M. Welch.
Brent Secretary, R. M. Ridsdill-Smith.

SHERREN CUP

The thirteen member hospitals of United Hospitals Sailing Club compete annually during Whitsun for this trophy, which Bart's has held for the past two years.

The heats took place on Saturday, when after a bad start, the Bart's crew improved their position to finish second, thus qualifying for the final.

The final was held on Whit Monday just after high water, with a moderate S.E. breeze. A long course of about 10 miles had been set: down the Crouch to Holliwell Buoy, then round the Pottion Buoy high up the Roach, back to Red Wand and home.

Bart's, sailing in *Amber*, started in the windward position and reached the Holliwell Buoy, close behind Guy's, with the London boat lying third. As the boats crossed into the mouth of the Roach the wind slackened, while the tide, ebbing fast, kept us close inshore. The tail of the fleet closed with the leaders and positions changed several times as tacking began. Guy's, still in the lead, chose the west shore, an experiment that paid handsomely, as they had built up a good lead by the time the remaining boats entered the Roach; Bart's was lying fourth at that stage. Soon, however, the third crew cut things too fine in cheating the tide, and ran aground, letting our boat through. Bart's gained slowly and eventually overtook the London boat.

In Pottion Reach we were lying a close second, and soon halved the distance by hoisting a spinnaker before Guy's recognised the advantage. As the Pottion Buoy was rounded, only a few feet of water separated the two boats. Guy's stood to windward and into the now favourable ebb, but Bart's went about immediately and, getting a clear wind sailed into the lead which they held until the finish. Helmsman: H. V. Blake. Crew: Miss A. Thomas, M. Bradbury.

SWIMMING

NURSES SWIMMING GALA

A damp but enthusiastic group of spectators gave vociferous support to their colleagues competing in the Bart's Nurses Swimming Gala held on June 12 at the Y.W.C.A. Baths, Great Russell Street.

Organized by the Nurses Swimming Club, this annual event produced some exciting finishes, and several good times were recorded. Especially notable was the performance of Miss E. A. Bennett who scored victories in the free style, back stroke, and obstacle races—this last was perhaps her finest achievement, as anyone who has swum 20 yards clad in pyjamas while carrying a lighted candle will appreciate.

Miss M. J. Hargreaves won the diving contest. The two relay races were closely contested, Bart's Smithfield beat Bart's Hill End by a touch, and the Second Year Nurses just got home first in the inter-year race.

The prizes were presented by Miss Keeling—the Swimming Cup going to Miss Bennett, whose performance in this, her first year, augurs well for the future of the club.

We wish the club success in the Inter-Hospitals Cup to be held later in the year.

BOOK REVIEWS

*Learning hath gained most by those books
which the printers have lost.*—FULLER.

PHYSICAL MEASURES IN THE TREATMENT OF POLIOMYELITIS by R. J. S. Reynolds. Faber, 12s. 6d.

This book, though written primarily for Physiotherapists, should be of interest to anyone dealing with patients suffering from Poliomyelitis.

The Author describes in detail the complete régime employed at Queen Mary's Hospital, Carshalton. The book is divided into sections, each stage being described with great care and accurate detail. For example, the first section deals with methods of positioning, types of bed and the application of hot pack.

Under 'Re-education' the Author explains the importance of maintaining full flexibility in all soft structures and the essential fact that voluntary movement is only possible if proprioception is present, and that movement must be built up through sensation.

Great stress is laid on precision and re-education during the first few months while recovery can still be hoped for, and this is described in considerable detail. The author also explains the early walking which is taught to stimulate normal gait patterns. Later the emphasis is more on functional activity and trick movements when no further recovery can be hoped for.

Altogether this is a most careful and reasoned exposition of what has proved an efficient method of treatment.

T. WAREHAM.

ATOMS AND THE UNIVERSE by G. O. Jones, J. Rotblat and G. J. Whitrow. Published by Eyre & Spottiswoode, Pp. 254. Price 25s.

This is a popular book in the best sense of the term. It succeeds admirably in its task of making understandable to the intelligent reader untrained in physics, the recent discoveries which have formed the basis of the great advances leading to the 'atom age.'

The relation of physics to other scientific disciplines is discussed, and a brief account follows of experimental method, the only method by which progress can be made. The universe is considered from within outwards, from the structure of the atom to the structure of matter, to that of the solar system and finally to that of the whole universe. This plan, although varying considerably from the history of physical discovery, enables a coherent picture to be built up. The theory of atomic energy becomes comprehensible, quantum mechanics are seen as a logical scientific tool.

There can be nothing but praise for this book which could, with advantage, be required reading in all schools. If appreciation of literature is

rightly considered to be part of everyone's education, surely some understanding of the structure of the world we live in is also necessary.

HUTCHINSON'S FOOD AND THE PRINCIPLES OF DIETETICS revised by V. H. Mottram, M.A., and George Graham, M.D., F.R.C.P. 11th edition, London, Edward Arnold (Publishers) Ltd. 40s., 630 pages.

The authors have completed what they say will be their last revision of this classic text in the field of nutrition and diet therapy. Much of the book has been re-written, notably the sections concerning proteins, minerals and food processing; and, in the clinical sections, the régimes advocated for the treatment of steatorrhoea, obesity and liver and renal diseases. Nevertheless the needs of the student of the history of nutrition and therapeutic dietetics are well provided for; there can be few texts which still include descriptions of so many of the earlier modes of dietary treatment.

The student will find this book invaluable as a reference text on methods of food processing and the distribution of nutrients in foods, particularly those from recondite sources.

MISS M. FURNIVALL.

SIR JOHN BLAND-SUTTON, 1855-1936 by W. R. Bett. E. & S. Livingstone Ltd. Pp. VIII, 100. + 7 plates. 20s.

An autobiography of Sir John Bland-Sutton was published in 1930 as *The Story of a Surgeon*, but in common with most autobiographies, it is unsatisfactory as a record of the author's achievements. It presents a discursive account that disappoints those in search of a pen portrait of the man, and a re-evaluation of Bland-Sutton twenty years after his death is a welcome addition to medical biography.

The son of a market gardener and butcher, Bland-Sutton entered the Middlesex in 1877, and occupied numerous posts on the staff, finally becoming consulting surgeon in 1920. He was also associated with the Chelsea Hospital, and occupied numerous positions of honour, receiving many distinctions from universities and professional bodies. A keen naturalist from an early age, Bland-Sutton travelled extensively to indulge his wide interests, and wrote effusively of his experiences. His best-known book, *Tumours, innocent and malignant*, went into seven editions between 1893 and 1922.

Bland-Sutton worked hard to achieve his ends, and reached the peak of his profession by sheer force of character coupled with a tenacity of

purpose. A brilliant lecturer and writer, he became prominent as a gynaecologist and surgeon, and financial success rewarded his efforts. At the back of his house in Brook Street he erected a replica of the Apodama at Susa (Persia), where he entertained lavishly.

The writings of Dr. Bett are well-known to Bart's men, for they occupy a conspicuous proportion of our *Recent Papers*, and this latest contribution from his pen will be welcomed as a valuable contribution to medical history. It is produced by the publishers in their well-known series of biographies which is attractive both in format and content.

J. L. THORNTON.

A SHORT PRACTICE OF SURGERY, 10th edition, by Hamilton Bailey and R. J. McNeill Love. Published by H. K. Lewis & Co. Ltd. Pp. 1126. Price £4 4s. 0d.

This familiar textbook has undergone a change in shape tending to reduce its stoutness. Unfortunately there is an associated increase in price; this edition costs over one-third more than the previous edition. Another departure from tradition is in the co-operation of specialist authors, an indication that the field of general surgery has become so vast that it cannot be encompassed by any one man. The best feature of this book, in common with previous editions, is the high standard of the illustrations.

WHYS AND WHEREFORES IN TUBERCULOSIS by George Day. Published by the N.A.P.T. Pp. 44. 3s. 6d.

Written by an old Bart's man, who has had many years of experience looking after patients suffering from Tuberculosis, this booklet is intended primarily for the layman. For this purpose it is entirely suited, being written in a simple conversational style which makes it easy to read and which should present no difficulties to those who are unfamiliar with medical terminology.

This book could also be read with advantage by those who are medically qualified; they will almost certainly be entertained by the author's sense of humour and choice of phrase.

MEDICAL TERMS, 2nd edition, by Ffrangeon Roberts. Published by Heinemann. Pp. 88. Price 6s.

A fascinating little book which gives the derivations of most common medical terms. The principles of etymology are outlined in the first part. The second part consists of lists of Latin and Greek words arranged according to the ideas represented, as in a thesaurus, followed by a literal translation and the medical word which incorporates it. A full index increases its value.



A Chance for Child-lovers

The geneticists, those unfortunate students of heredity, are agitated by the way families in this century have shrunk in size. If any race—whether of men or of animals—is to thrive, and maintain a good stock, they say, there must be plenty of them about, so that the genes have plenty of opportunities for reshuffle. The genes are those mysterious bits of nuclear protoplasm by which hereditary characteristics are handed down from generation to generation; and of course every child gets half his genes from his father and half from his mother.

Well, the geneticists say, there must be plenty of cards in the pack if shuffling and re-dealing is to produce interesting and refreshing combinations. The smaller the pack the smaller the variety of hands you can deal.

But the hereditary pack, confound it, doesn't even remain constant. The genes in every generation show . . .

Would you like to hear more? Unfortunately, space will not permit reproduction of the whole of this entertaining and informative essay, as it appeared originally in The Times. It is one of a collection of delightful medical musings—all from the same wise and witty pen. If you would like a copy of "The Proving of Podalirius" just send us a card at the address below.

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If you are at a loss for a present, why not buy *Round the Fountain*? Copies may be seen and purchased in the Library and Nurses Post Office or obtained by post from The Business Manager of the Journal, St. Bartholomew's Hospital, E.C.1.

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Dr. E. F. SCOWEN	Garrod		2.00		2.00	
Dr. H. W. BALME	Stanmore					2.00
Dr. J. W. ALDREN TURNER		10.15				
Dr. A. W. SPENCE	Dalziel of Wooler			10.30	2.00	
Dr. N. C. OSWALD	Annie Zunz					1.45
Dr. G. BOURNE	Smithfield		2.00			2.00
Dr. G. W. HAYWARD	Mary				2.00	
Dr. R. BODLEY SCOTT	Harvey	2.00			10.00	
Dr. W. E. GIBB	Luke					2.00
Dr. E. R. CULLINAN	Colston		10.30		2.00	
Dr. K. O. BLACK	Rahere			10.30		2.00
Prof. Sir J. PATERSON ROSS	Lawrence	1.30 or 10.00*				1.30
Mr. G. W. TAYLOR	Percivall Pott				10.00 or 1.30*	
Mr. J. B. HUME	Harmsworth		1.30		1.30	
Mr. A. H. HUNT	Fleet Street					10.15
Mr. J. P. HOSFORD	Paget	10.00				
Mr. E. G. TUCKWELL	Rees Mogg				1.30	
Mr. R. S. CORBETT	Bowlby		10.30		1.40	
Mr. A. W. BADENOCH	Heath Harrison	11.00				
Mr. C. NAUNTON MORGAN	Abernethy		1.30			9.00
Mr. D. F. ELLISON NASH ..	Waring					1.30
Dr. C. F. HARRIS	Lucas	10.30				
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Mr. D. B. FRASER	Sandhurst				10.00	
Mr. J. HOWKINS			11.30			
OBSTETRICS	Elisabeth	2.00			10.00	
	Martha					

* When an Introductory Course is being held.

TIMES FOR ATTENDANCE IN THE OUT-PATIENTS' AND SPECIAL DEPARTMENTS

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
* MEDICAL OUT-PATIENTS New Cases: 9 a.m.	Dr. K. O. Black 9 a.m. Dr. G. W. Hayward 10 a.m.	Dr. H. W. Balme 10 a.m. Medical Unit 9 a.m.	Dr. N. C. Oswald 9 a.m. Dr. W. E. Gibb 10 a.m.	Dr. G. Bourne 9 a.m. Dr. K. O. Black 10 a.m.	Dr. H. W. Balme 9 a.m. Dr. E. F. Scowen 10 a.m.	Dr. W. E. Gibb 9 a.m. Dr. N. C. Oswald 10 a.m. Dr. R. Bodley Scott 9 a.m.
* SURGICAL OUT-PATIENTS New Cases: 9 a.m.	Mr. E. G. Tuckwell 9 a.m.	Surg. Prof. Unit 9 a.m.	Mr. A. H. Hunt 9 a.m.	Mr. D. F. Ellison Nash 9 a.m.	Mr. A. W. Badenoch 9 a.m.	Duty Surgical Firm
* DISEASES OF WOMEN ANTE-NATAL	Mr. J. Beattie 9 a.m. (Ante-Natal) Leucorrhoea Clinic 1.30 p.m.	Mr. J. Howkins 9 a.m. (Ante-Natal) Infertility Clinic 1.20 p.m.	Post Natal Clinic 9.15 a.m. Mr. J. Beattie 12.30 p.m. (Gynae.)	Mr. D. B. Fraser (Ante-Natal) 12.30 p.m.	Mr. J. Howkins 9 a.m.	Mr. D. B. Fraser 9 a.m. (Gynae.)
* ORTHOPAEDIC DEPARTMENT	Mr. H. J. Burrows 9 a.m. (Fracture Clinic) Mr. H. J. Burrows 1 p.m.			Mr. S. L. Higgs Mr. W. D. Coltart 1 p.m.	Mr. W. D. Coltart 9 a.m. (Fracture Clinic)	
* EAR, NOSE & THROAT DEPARTMENT	Mr. J. W. Cope 9.15 a.m.	Mr. F. C. W. Capps Mr. J. C. Hogg 9.30 a.m. Mr. N. A. Jory 1.30 p.m.	Allergy Clinic (9.30 a.m.)	Mr. J. C. Hogg 9.15 a.m.	Mr. N. A. Jory Mr. J. W. Cope 9.30 a.m. Mr. F. C. W. Capps 1.30 p.m.	
* OPHTHALMIC DEPT.	Refraction Clinic 1.30 p.m.	Mr. H. B. Stallard 1 p.m.		Refraction Clinic 1.30 p.m.	Mr. H. B. Stallard 1 p.m.	
* SKIN DEPARTMENT	Dr. R. M. B. MacKenna 2.15—4.15 p.m.	Dr. P. F. Borrie 9 a.m.—12.30 p.m.	Dr. R. M. B. MacKenna 9 a.m. Dr. P. F. Borrie 2—4 p.m.		Dr. P. F. Borrie 9 a.m.—1 p.m. Dr. R. M. B. MacKenna 9 a.m.	
* DISEASES OF CHILDREN	Dr. C. F. Harris Dr. A. W. Franklin 1 p.m. (Babies under 1)	Dr. C. F. Harris 1 p.m. (Children to 12)			Dr. A. W. Franklin 1 p.m. (Children 1 to 12)	
DENTAL DEPARTMENT	Mr. G. A. Cowan 9.30 a.m.	Mr. G. T. Hankey 9.30 a.m.	Mr. J. D. Cambrook 9.30 a.m.	Mr. G. A. Cowan 9.30 a.m.	Mr. G. T. Hankey 9.30 a.m.	Mr. J. D. Cambrook 9.30 a.m.
TUBERCULOSIS DISPENSARY		New 12.30—1.30 p.m. Cases 5—7 p.m.†			By appointment only 3 p.m.	
MATERNITY & CHILD WELFARE (City Residents only)	2—4 p.m.		2—4 p.m.			
† VENEREAL DEPARTMENT	Male Clinic 11 a.m.—1.45 p.m. Men 9.30 a.m.—6 p.m. Women 4—6 p.m.	Female Clinic 11 a.m.—1.45 p.m. Male & Female Clinic 4—6 p.m. Men 4—6 p.m.	No Clinics Men 9.30 a.m.—5 p.m.	Male Clinic 11 a.m.—1.45 p.m. Men 11 a.m.—1.45 p.m.	Female Clinic 11 a.m.—1.45 p.m. Men 4—6 p.m.	Men & Women 9.15—11.15 a.m.
* PLASTIC SURGERY			Sir Archibald McIndoe 2 p.m. Mr. P. H. Jayes 1.30 p.m. (1st & 3rd Wednesdays)			
* PSYCHOLOGICAL DEPT.				Dr. E. B. Strauss 2 p.m. (New Cases only) 5.30 p.m.: Old Cases by app. with Psychi- atric Social Worker	Dr. E. B. Strauss 2 p.m. (Old patients and new Children seen by app. with Psychiatric Soc. Worker)	
* NEUROLOGICAL DEPT.		Dr. J. W. Aldren Turner 1.15 p.m.			Dr. J. W. Aldren Turner 1.15 p.m.	
* NEUROSURGICAL DEPT.		Mr. J. E. A. O'Connell 1.15 p.m.				
* THORACIC SURGERY	Mr. I. M. Hill 1.30 p.m.		Mr. O. S. Tubbs 10.30 a.m.			
* SPECIAL & FOLLOW-UP CLINICS	Dr. G. Bourne 11 a.m. Mr. J. P. Hosford 2.30 p.m. Ward Follow-up (1st & 3rd Mondays)	Speech Therapy 1.30 p.m. Mr. D. F. E. Nash 1.45 p.m. (Eureasis) (1st & 3rd Tuesdays) Mr. J. B. Hume 4 p.m. Mr. C. Naunton Morgan (2nd or 4th Weds.)	Mr. J. P. Hosford 1 p.m. Mr. A. W. Badenoch 1.45 p.m. (Cystoscopy) (1st, 2nd & 3rd Weds.)	Dr. G. Bourne 10 a.m. (Cardiological) Dr. E. R. Cullinan 10 a.m. (Gastroenterological) Dr. R. Bodley Scott 2 p.m. (Anaemia) Dr. K. O. Black 4.30 p.m. (Diabetic) Dr. A. W. Spence 4.30 p.m. (Endocrine) Speech Therapy 9.30 a.m. Surg. Prof. Unit 2 p.m. (Ward Follow-up)	Dr. E. F. Scowen 10.30 a.m. Med. Unit 10.30 a.m. Mr. R. S. Corbett 10.30 a.m. Dr. K. O. Black 10.30 a.m. (Diabetic) Surg. Prof. Unit 1.45 p.m. (Vascular Diseases) Speech Therapy 1.30 p.m.	Dr. A. W. Spence 9 a.m.—10.15 a.m. (Endocrine)
RADIO THERAPY DEPT.	Dr. W. M. Levitt 1.30 p.m.	Mr. I. G. Williams 1.30 p.m.		Dr. A. E. Jones 1.30 p.m.		

* By appointment only with the Appointments Department.

† There is a Fracture Clinic daily at 9.30 a.m. attended by a Registrar to the Orthopaedic Department.

‡ Children's Casualty: Monday—Friday, 1 p.m. Saturday, 9 a.m.

§ These hours are intended only for patients who cannot attend at mid-day.

¶ In addition to the Clinic times listed a male orderly will be on duty and a House Physician on call 9 a.m.—5 p.m. daily and 9 a.m.—12.30 p.m. on Saturday.

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